

KV-13M10/MT1300/14R10/1460R

RM-Y116

RM-Y123

RM-Y116

RM-Y123

SERVICE MANUAL

US Model

KV-13M10

Chassis No. SCC-G92A-A

Canadian Model

KV-13M10

Chassis No. SCC-G94B-A

KV-MT1300

Chassis No. SCC-G94A-A

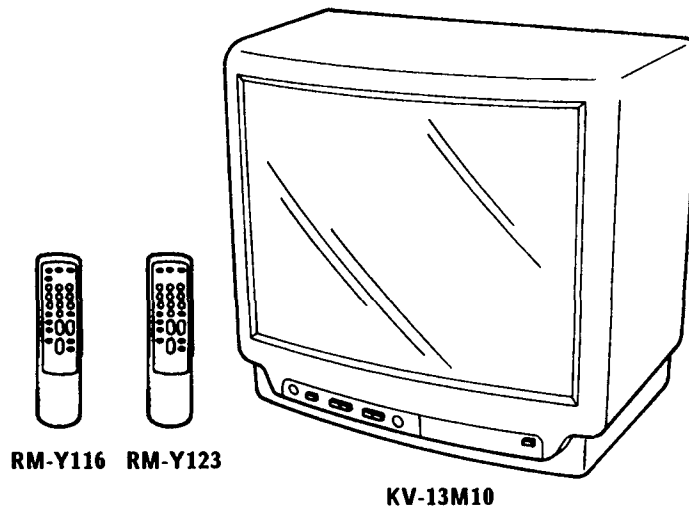
E Model

KV-14R10

Chassis No. SCC-G93D-A

KV-1460R

Chassis No. SCC-G93A-A



BA-2 CHASSIS

MODELS OF THE SAME SERIES

KV-13M10/MT1300/14R10/1460R

KV-20M10/20S10/MT2000/ST2050

KV-21R10/21RS10/2180R/2190RS

SPECIFICATIONS

Television system

American TV standard

Channel coverage

VHF: 2-13

UHF: 14-69

CATV: 1-125

Antenna

75-ohm external antenna terminal for
VHF/UHF

Picture tube

Trinitron® tube

Power requirements

120 V, 60 Hz

Screen size

13 in.

Inputs

1 video, 1 audio (KV-13M10/14R10 only)

Speaker output

1 W

Power consumption

75 W when in use

4 W in standby

Dimensions (W/H/D)

372 × 339 × 408 mm

(14 ³/₄ × 13 ³/₈ × 16 ¹/₈ in.)

Mass

10.3 kg (22 lb 12 oz)

Supplied accessories

Size AA batteries (2)

KV-13M10: Remote commander

RM-Y116 (1) Dipole antenna(1)

KV-MT1300: Remote commander

RM-Y123 (1) Antenna connector (1)

KV-1460R: Remote commander

RM-Y123 (1) Dipole antenna(1),

Antenna connector (1)

Design and specifications are subject to
change without notice.



TRINITRON® COLOR TV

SONY®

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(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
 THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
 LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE Δ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer :

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

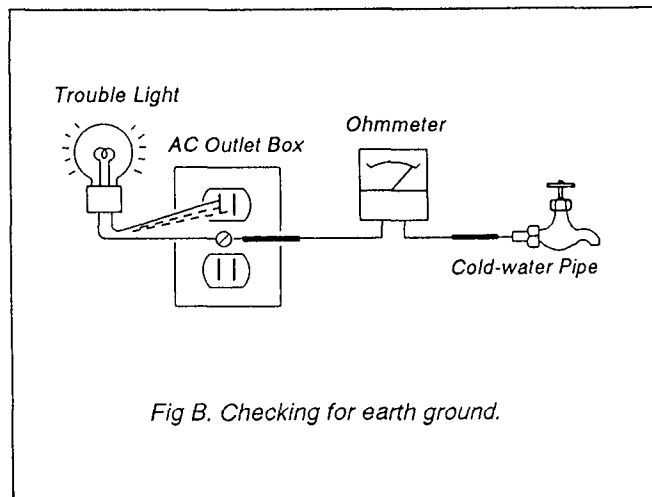
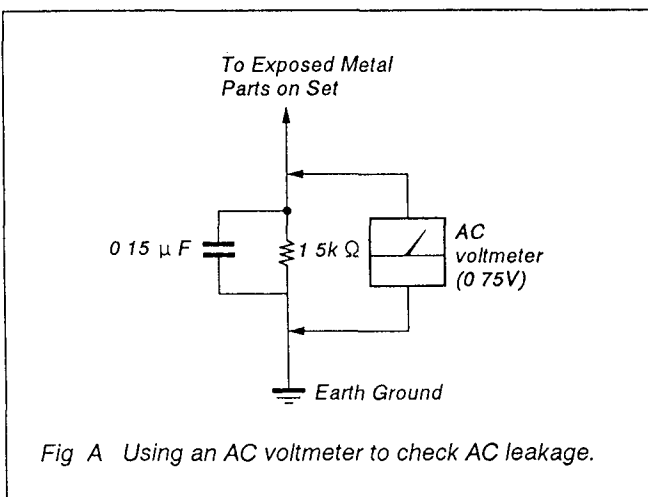
LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line; the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)



SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

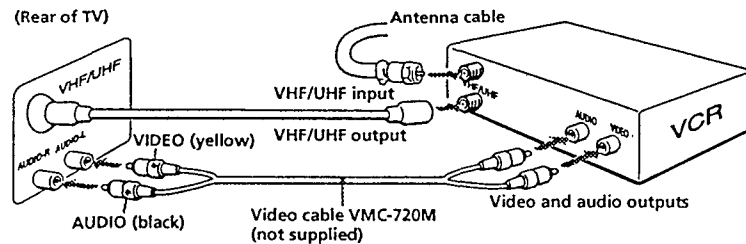
Connections

Connecting to a VCR

To connect the VCR to the TV, first check the model number of the TV and select the appropriate connection diagram below. For details on connection, see the instruction manual of the VCR. Before making the connection, disconnect the AC power cords of equipment being used.

■ For KV-13M10/14R10

(Rear of TV)

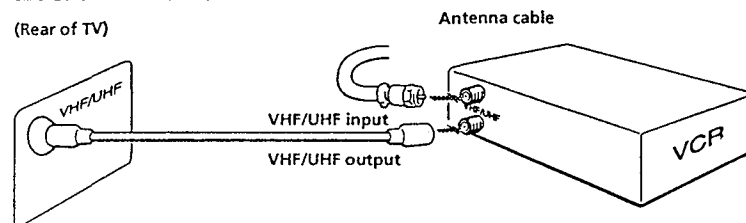


To watch video tapes

Press the TV/VIDEO button until "VIDEO" appears on the screen.

■ For KV-MT1300/1460R

(Rear of TV)



To watch video tapes

- 1 On the TV: Preset channel 3 or 4, whichever is not used in your area, following the instructions for adding channels in "Presetting channels" (page 13).
- 2 On the VCR: Set the channel to the same channel as chosen above. Then begin viewing the video tape.

8 | Setting up

Setting cable TV on or off

If the TV is connected to a cable TV system, then the factory setting CABLE ON is correct. If the TV is not connected, set CABLE to OFF.

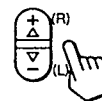
Note

If more than 90 seconds elapse after you press a button, the menu disappears automatically.

- 1 Press MENU.
The main menu appears.



- 2 Press Δ+ or ∇- on the remote commander to move the cursor (▶) on the screen to SET UP. To select that function, press RETURN.
The SET UP menu appears.

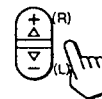


Note

If CABLE appears in black, the TV is set to video input and CABLE cannot be selected. Press TV/VIDEO so that a channel number appears.

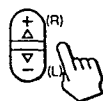
- 3 Set CABLE to ON or OFF.

(1) If the cursor is not beside CABLE, press Δ+ or ∇- to move the cursor and press RETURN.

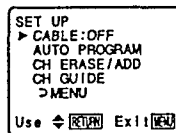


10 | Setting up

(2) Press Δ + or ∇ -, to select ON or OFF.



(3) Press RETURN.



4 Press MENU to return to the original screen.

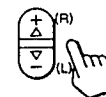


Presetting channels

TV channels can be preset easily: first store all the receivable channels automatically, following the procedure below. Next, erase unwanted channels or add additional channels. Preset channels during the day rather than late at night, when some channels may not be broadcasting.

1 Press MENU.

2 Press Δ + or ∇ - on the remote commander to move the cursor ($\blacktriangleright$) on the screen to SET UP and press RETURN.
The SET UP menu appears.

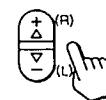


Note

If AUTO PROGRAM appears in black, the TV is set to video input and AUTO PROGRAM cannot be selected. Press TV/VIDEO so that a channel number appears.

3 Select AUTO PROGRAM.

(1) Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to AUTO PROGRAM.



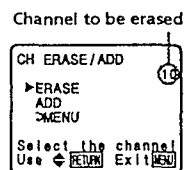
(2) Press RETURN.



"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed.

Erasing or adding channels

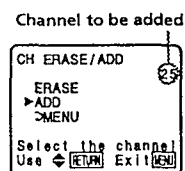
- 1 Press MENU.
- 2 Press Δ + or ∇ - to select SET UP and press RETURN.
- 3 Press Δ + or ∇ - to select CH ERASE/ADD and press RETURN.
- 4 To erase an unwanted channel:
 - (1) Press CH +/- to select the channel you want to erase.
 - (2) Make sure the cursor ($\blacktriangleright$) is beside ERASE.



- (3) Press RETURN.
The indication "-" appears beside the channel number, showing that the channel is erased from the preset memory.

To add a channel that you want:

- (1) Press 0-9 buttons to select the channel you want to add and press ENTER.
- (2) Press Δ + or ∇ - to select ADD.



- (3) Press RETURN.
The indication "+" appears beside the channel number, showing that the channel is added to the preset memory.

- 5 To erase and/or add other channels, repeat step 4.

- 6 When finished, press MENU.

Note

If you erase or add a VHF or UHF channel, the cable TV channel with the same number is also erased or added, and vice versa.

Available Features

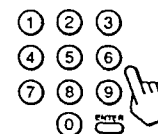
Functions

Note

If "VIDEO" appears on the screen, press TV/VIDEO so that a channel number appears.

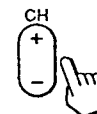
Selecting a channel directly

Press the 0-9 buttons to select a channel. Or press ENTER after entering the channel for immediate selection.



To scan through channels

Press CH +/- until the channel you want appears.



Switching quickly between two channels

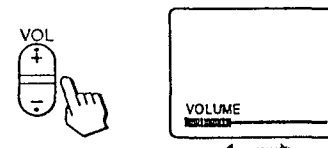
Press JUMP.

The channel you watched previously appears. Pressing JUMP again switches back to the previous channel.



Adjusting the volume

Press VOL +/- to adjust the volume.



Muting the sound

Press MUTING.
"MUTING" appears on the screen.



To restore the sound, press MUTING again, or press VOL +.

Displaying on-screen information

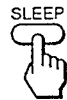
Use this feature to check your channels and MTS mode.
Press DISPLAY.



To cancel the display, press DISPLAY again.

Setting the Sleep Timer

The TV stays on for the length of time specified and then shuts off automatically.
Press SLEEP repeatedly until the time (minutes) wanted appears. Each time you press SLEEP, the time changes as follows: 30 → 60 → 90 → OFF.



To cancel the Sleep Timer, press SLEEP repeatedly until "SLEEP OFF" appears, or turn the TV off.

Note

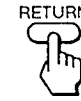
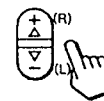
If DISPLAY or MUTING is pressed with Caption Vision selected, the channel or muting display will disappear after a few seconds.

Setting the language preference

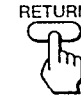
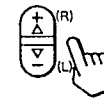
■ For models KV-14R10/1460R

If Spanish is preferred to English, the menu language can be changed.

- 1 Press MENU.
- 2 Press Δ+ or ∇- to move the cursor (▶) to ENGLISH and press RETURN.



- 3 Press Δ+ or ∇- to select SPANISH and press RETURN.



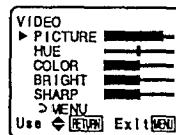
- 4 Press MENU to return to the normal screen.



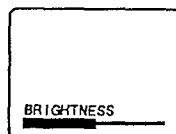
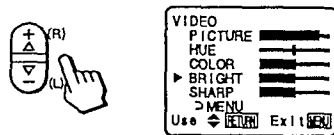
Adjusting the picture

When watching TV programs, the quality of the picture can be adjusted to suit your taste.

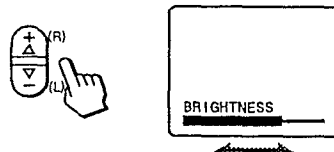
- 1 Press MENU.
- 2 Make sure the cursor (►) is beside VIDEO and press RETURN.



- 3 Select the item to adjust. See following chart for details on results of adjustments. For example:
To adjust brightness, press $\Delta+$ or $\nabla-$ to select BRIGHT and press RETURN.



- 4 Adjust the selected item:
(1) Press $\Delta+$ or $\nabla-$ to adjust the item.



- (2) Press RETURN.

The new setting appears in the VIDEO menu.

- 5 To adjust other items, repeat steps 3 and 4 above.

Description of adjustable items

Item	Adjustment	
	Press $\Delta+$ to	Press $\nabla-$ to
PICTURE	Increase picture contrast for vivid color	Decrease picture contrast for soft color
HUE	Make skin tones become greenish	Make skin tones become purplish
COLOR	Increase color intensity	Decrease color intensity
BRIGHT	Brighten the picture	Darken the picture
SHARP	Sharpen the picture	Soften the picture

To restore the factory settings

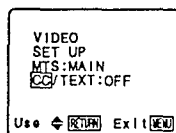
Press RESET while the VIDEO menu is displayed. All the settings except PICTURE are restored to factory settings.

Displaying Caption Vision

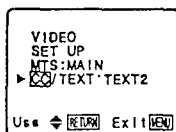
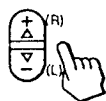
■ USA and Canadian models only

Some programs are broadcast with Caption Vision. To display Caption Vision, select either CC1, CC2, TEXT1, or TEXT2 from the menu. CC1 or CC2 shows you a caption, that is a printed version of the dialog or sound effects of a program. (The mode should be set to CC1 for most programs.) TEXT1 or TEXT2 shows you text, that is information presented using half of the screen. It is not usually related to the program.

- 1 Press MENU.
- 2 Press Δ + or ∇ - to select **CC** /TEXT and press RETURN.



- 3 Press Δ + or ∇ - to select the caption type and press RETURN.



Notes

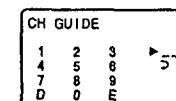
- Captions disappear for a few seconds when you press the DISPLAY or MUTE button.
- Captions may appear with a white box or other errors instead of a certain word. Poor reception of TV programs can also cause errors in captions.

Customizing the channel number buttons

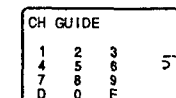
Up to 12 channels can be assigned to a specific channel number. This feature allows the easy selection of your favorite channels using the on-screen menu. For example, channel number button 2 can be assigned to channel 124.

Assigning a channel number button to a favorite channel

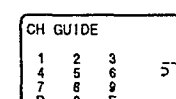
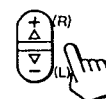
- 1 Press MENU.
- 2 Press Δ + or ∇ - to select SET UP and press RETURN.
- 3 Press Δ + or ∇ - to select CH GUIDE and press RETURN.



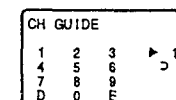
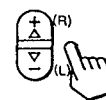
- 4 Press RETURN again.



- 5 Press Δ + or ∇ - to select a customized channel number (chosen number will appear in red) and press RETURN. Numbers 0-9 and DISPLAY and ENTER are available for use as a customized channel number. DISPLAY and ENTER are shown as D and E respectively on the screen. The channel number button selected will be the one you press to call up your favorite channel.



- 6 Press Δ + or ∇ - to select the channel and press RETURN.



- 7 Repeat steps 5 and 6 to set other channels.

To cancel a setting

Select the channel you want to cancel in step 5, then press RESET.

Using the customized channel number buttons

- 1** Press CH GUIDE.
The CHANNEL GUIDE menu appears showing channel number buttons and the corresponding channels.
- 2** Press a channel number button, DISPLAY or ENTER on the commander to select the channel you want.

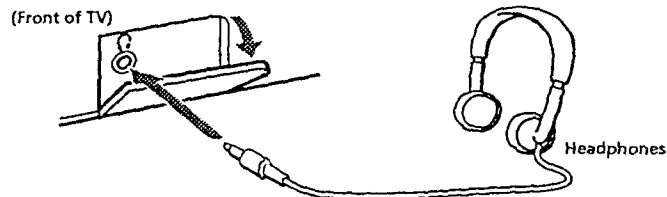
To cancel the CHANNEL GUIDE menu

Press CH GUIDE while the CHANNEL GUIDE menu is displayed.

Listening with headphones

■ For models KV-13M10/14R10

Plug the headphones into the headphones jack.

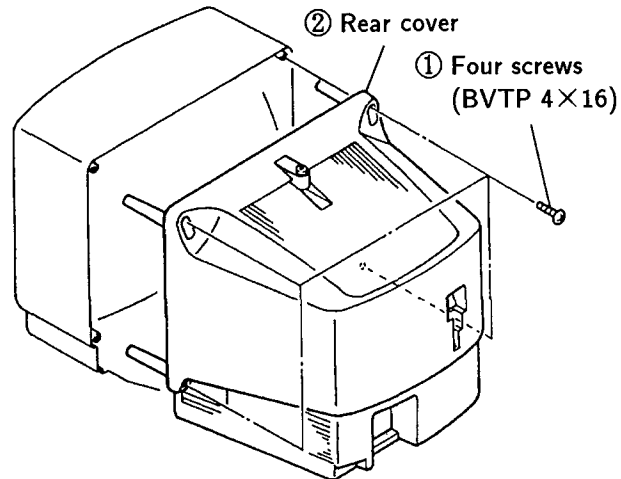


Notes

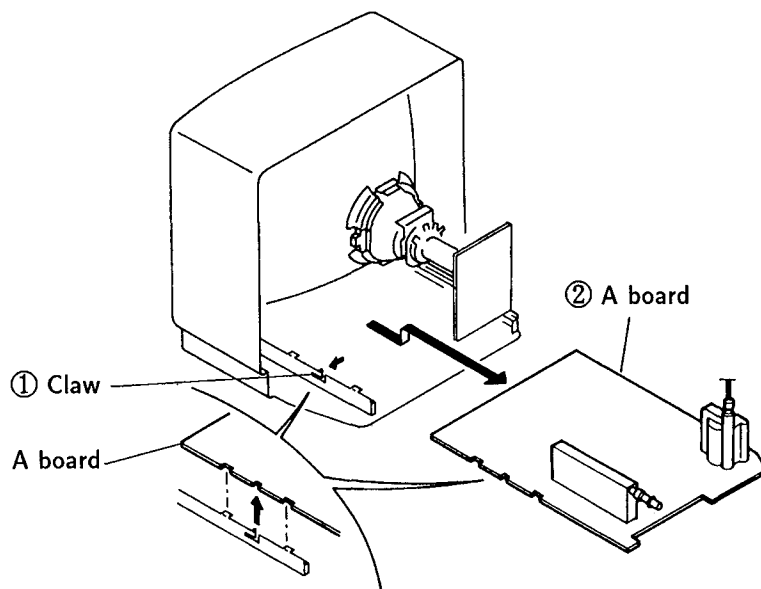
- To prevent hearing damage due to sudden or prolonged excessive volume, do not raise the headphones volume too high while listening.
- Using the headphones jack will turn off the sound to TV speakers.
- If your TV is a monaural TV, the monaural sound will be heard from both headphones.

SECTION 2 DISASSEMBLY

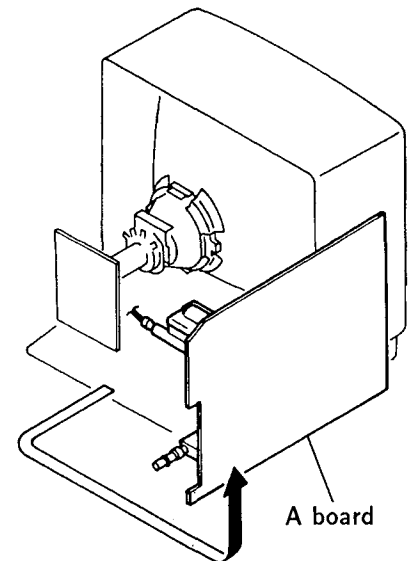
2-1. REAR COVER REMOVAL



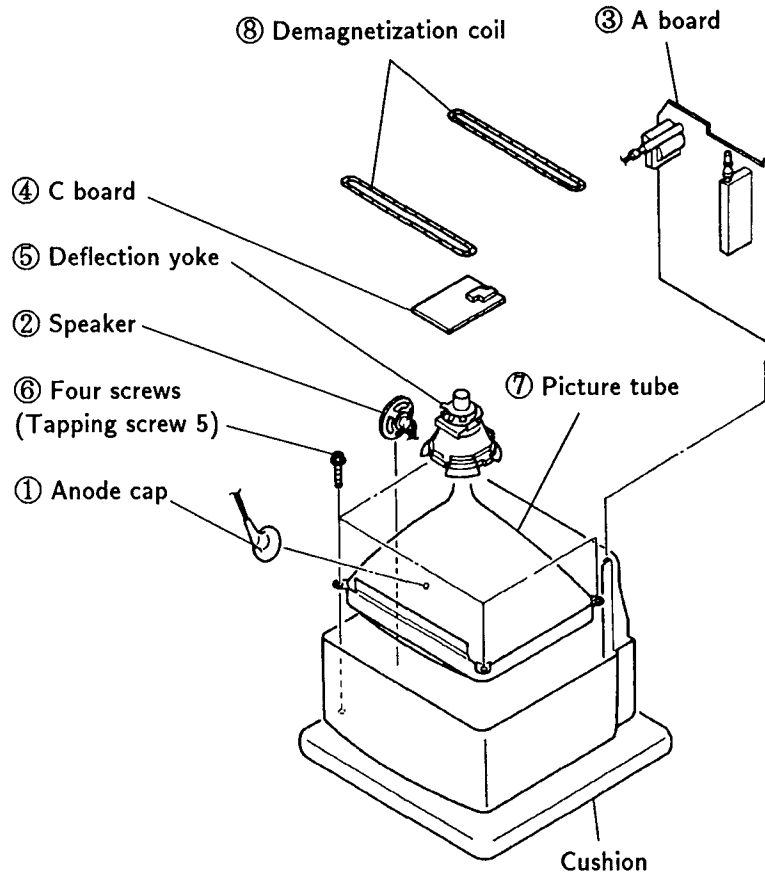
2-2. A BOARD REMOVAL



2-3. SERVICE POSITION



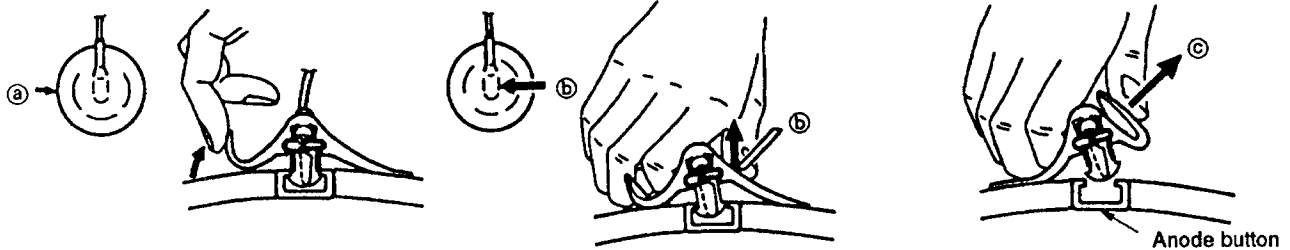
2-4. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES



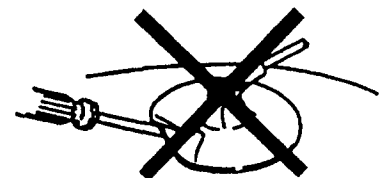
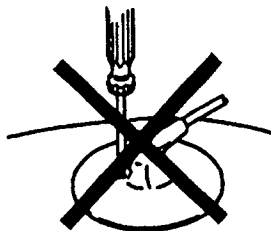
① Turn up one side of the rubber cap in the direction indicated by the arrow ③.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3

SET-UP ADJUSTMENTS

KV-13M10/MT1300/
RM-Y116 RM-Y123
KV-14R10/1460R
RM-Y116 RM-Y123

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch should be set as follows unless otherwise noted:

PICTURE control	normal
BRIGHTNESS control	normal

Preparation:

- Feed in the white pattern signal.
- Before starting, degauss the entire screen.

3-1. BEAM LANDING

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig.3)
5. Move the deflection yoke forward, and adjust so that the entire screen becomes green. (Fig.1)
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corner is not right, adjust by using the disk magnets. (Fig.4)

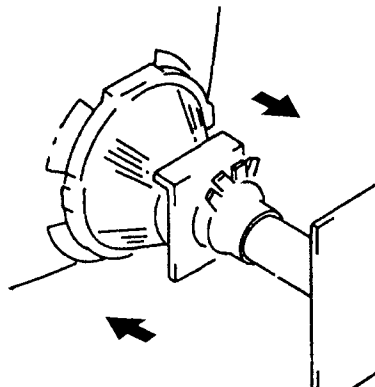


Fig.1

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G 2) and White Balance

Note: Test Equipment Required.

1. Color bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multi-meter

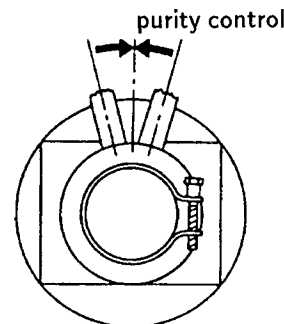


Fig.2

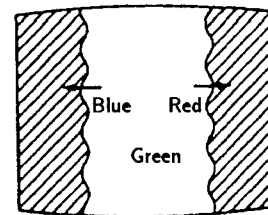


Fig.3

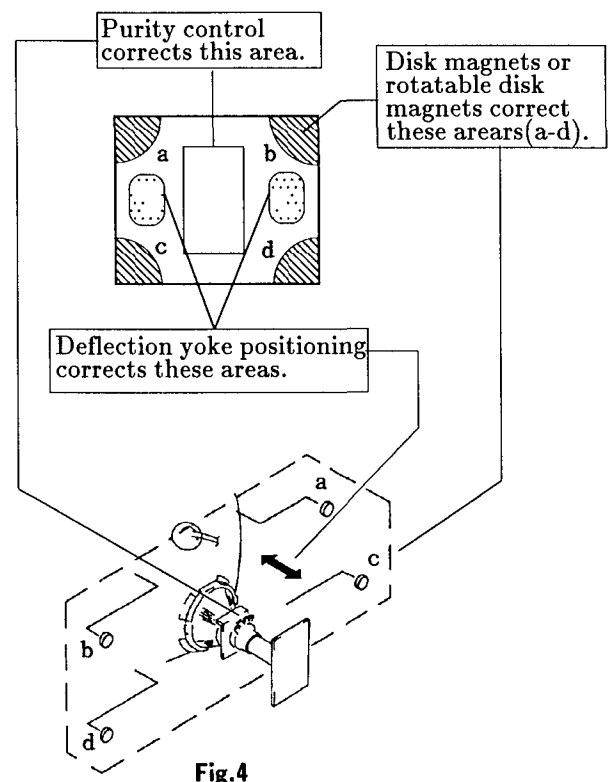


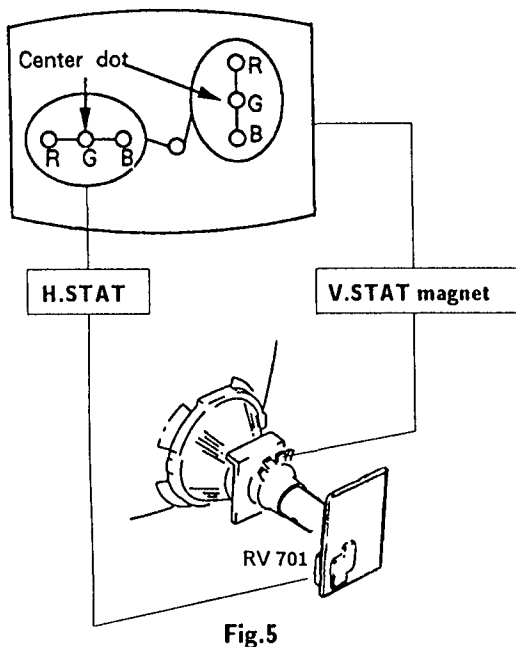
Fig.4

3-2. CONVERGENCE

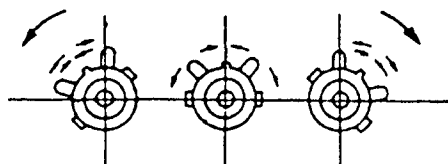
Preparation:

- Before starting, perform FOCUS, H.SIZE, V.LIN and V.SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in dot pattern.

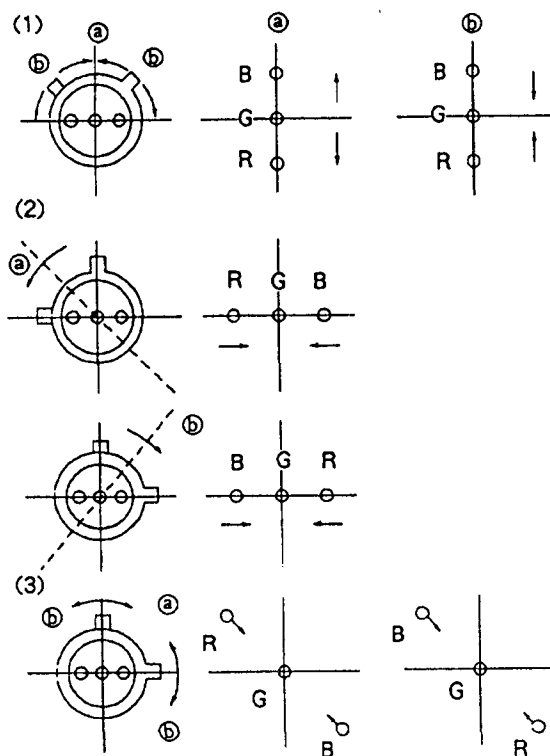
(1) Horizontal and Vertical Static Convergence



1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
 2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
 3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4. When the V.STAT magnet is moved in the direction of arrow ② and ③, red, green and blue dots move as shown below.



If the blue dot does not converge with red and green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

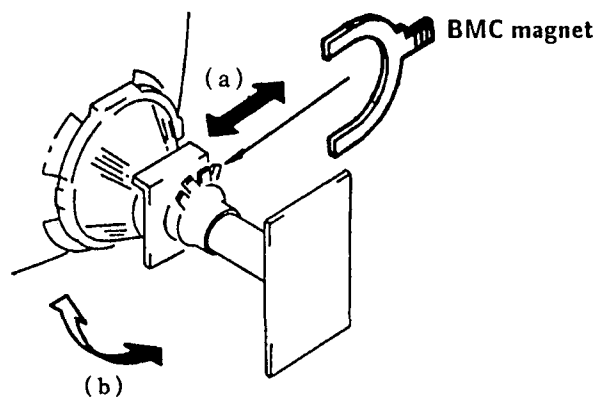


Fig.6

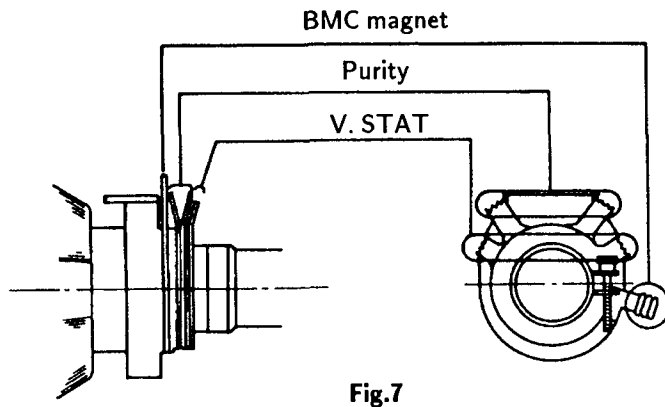


Fig.7

(2)Dynamic Convergence Adjustment

Preparation:

● Before starting perform Horizontal and Vertical static convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

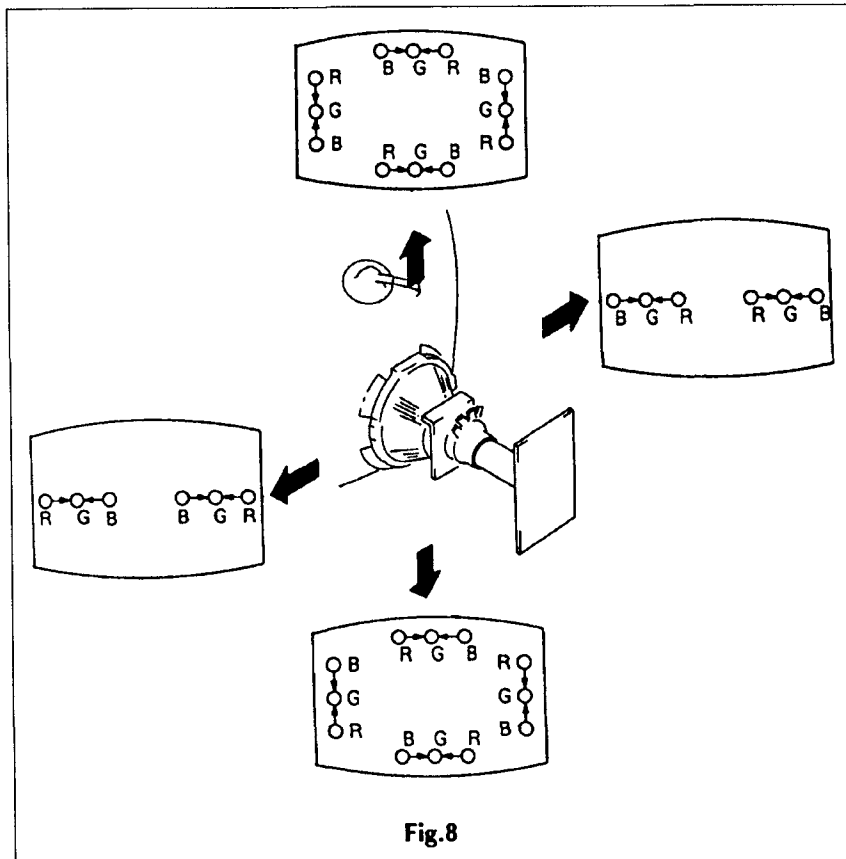


Fig.8

(3) Screen-corner Convergence

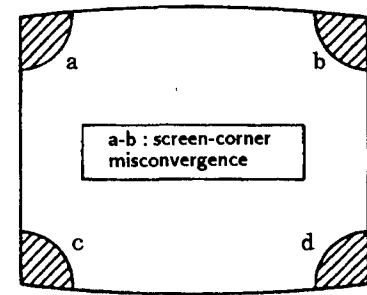
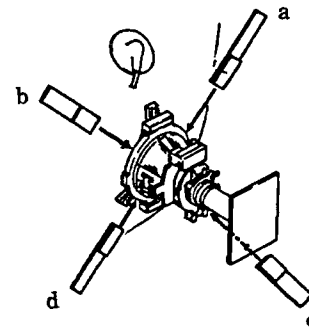


Fig.9



Affix a Permalloy ass'y corresponding to the misconverged areas



Permalloy assembly

3-3. FOCUS

Adjust FOCUS (RV 703) control for best picture.

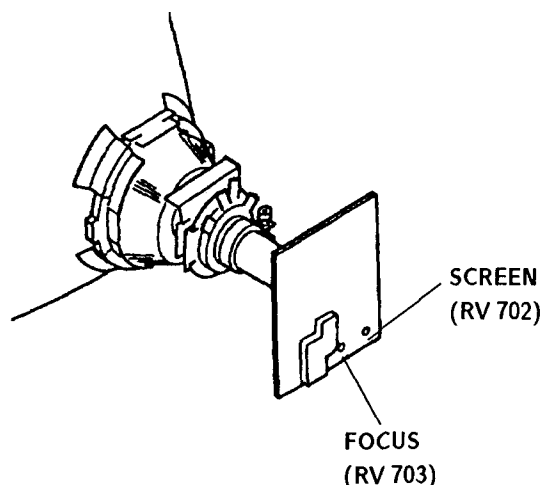


Fig.10

3-4. SCREEN(G 2)

1. Input a dots pattern.
2. Set the PICTURE and BRIGHT controls at minimum and COLOR control at normal.
3. Adjust BKG VRs so that voltages on the red, green and blue cathodes are 160 V dc with an oscilloscope as shown in Fig.11.
4. Observe the screen and adjust SCREEN (G 2 RV 702) to obtain the faintly visible background of dot signal.

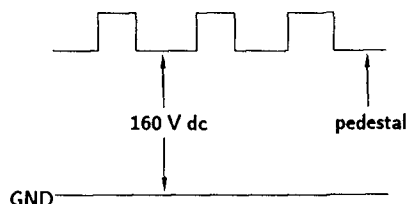


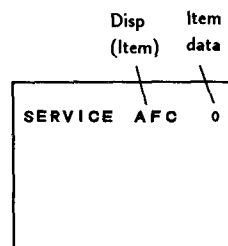
Fig.11

3-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

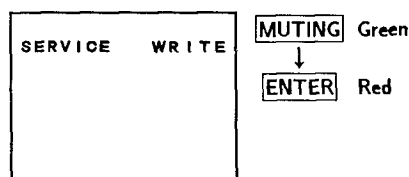
1. Standby mode.(Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander. (Press each button within a second.)

SERVICE ADJUSTMENT MODE IN



3. The CRT displays the item Being adjusted.
4. Press **1** or **4** on the Remote Commander to select the item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **MUTING** then **ENTER** to write into memory.

SERVICE ADJUSTMENT MODE MEMORY



7. Turn set off and on to exit.

3-6. WHITE BALANCE ADJUSTMENTS

1. Input an entire white signal.
2. Set to service adjustment mode.
3. Set the PICTURE and BRIGHT to minimum.
4. Adjust with SBRT if necessary.
5. Select G CUT and B CUT with **1** and **4**.
6. Adjust with **3** and **6** for the best white balance.
7. Set the PICTURE and BRIGHT to maximum.
8. Select GAMP and BAMP with **1** and **4**.
9. Adjust with **3** and **6** for the best white balance.
10. Write into the memory by pressing **MUTING** then **ENTER**.

SECTION 4

SAFETY RELATED ADJUSTMENTS

A BOARD

☒ R525 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ☒ on the schematic diagram).

IC502, IC601, Q554, Q555, D505, D506, D507, D510, DY, C511, C513, C528, C531, R511, R519, R520, R523, R525, R527, R557, R558, R559, R560, R617, R618, T504 (FBT)

1. Preparation before confirmation

- 1) Turn the POWER switch ON, and receive entirely white signal and set the PICTURE and BRIGHT controls to maximum.
- 2) Confirm that the voltage of the check terminal of TP85 is more than 90VDC when the set is operating normally with 120.0 ± 2.0 VAC supply.

2. Hold-down operation confirmation

- 1) Connect the currentmeter between the 7th pin of FBT (T504) and the land of it with connect polarity.
- 2) Receive White Signal and adjust the ABL current to follows with the PICTURE and the BRIGHT controls.
 $1040 \pm 100 \mu\text{A}$
- 3) Confirm the voltage of A board TP-91 is 115.0 ± 0.5 VDC.
- 4) Connect the Digital Voltmeter and DC power Supply via 1SS 119 to TP-85.
- 5) Increase the DC power voltage gradually until the Picture just blanks out.
- 6) Read the digital voltmeter indication.
- 7) Turn DC power Source off immediatary.

STANDARD

Less or equal to 124.5 VDC

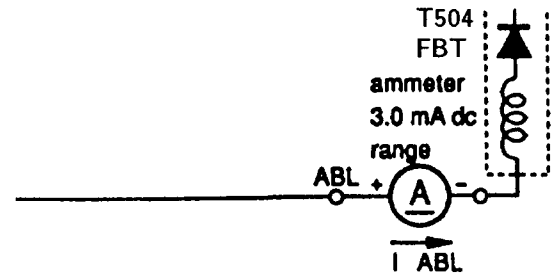
- 8) Receive Dot Signal and adjust the ABL current to follows, with the PIX and the BRT controls.
 $40+100/-50 \mu\text{A}$
- 9) Repeat steps from (3) to (7).

STANDARD

Less or equal to 124.5 VDC

3. Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R525 (a component marked with ☒).

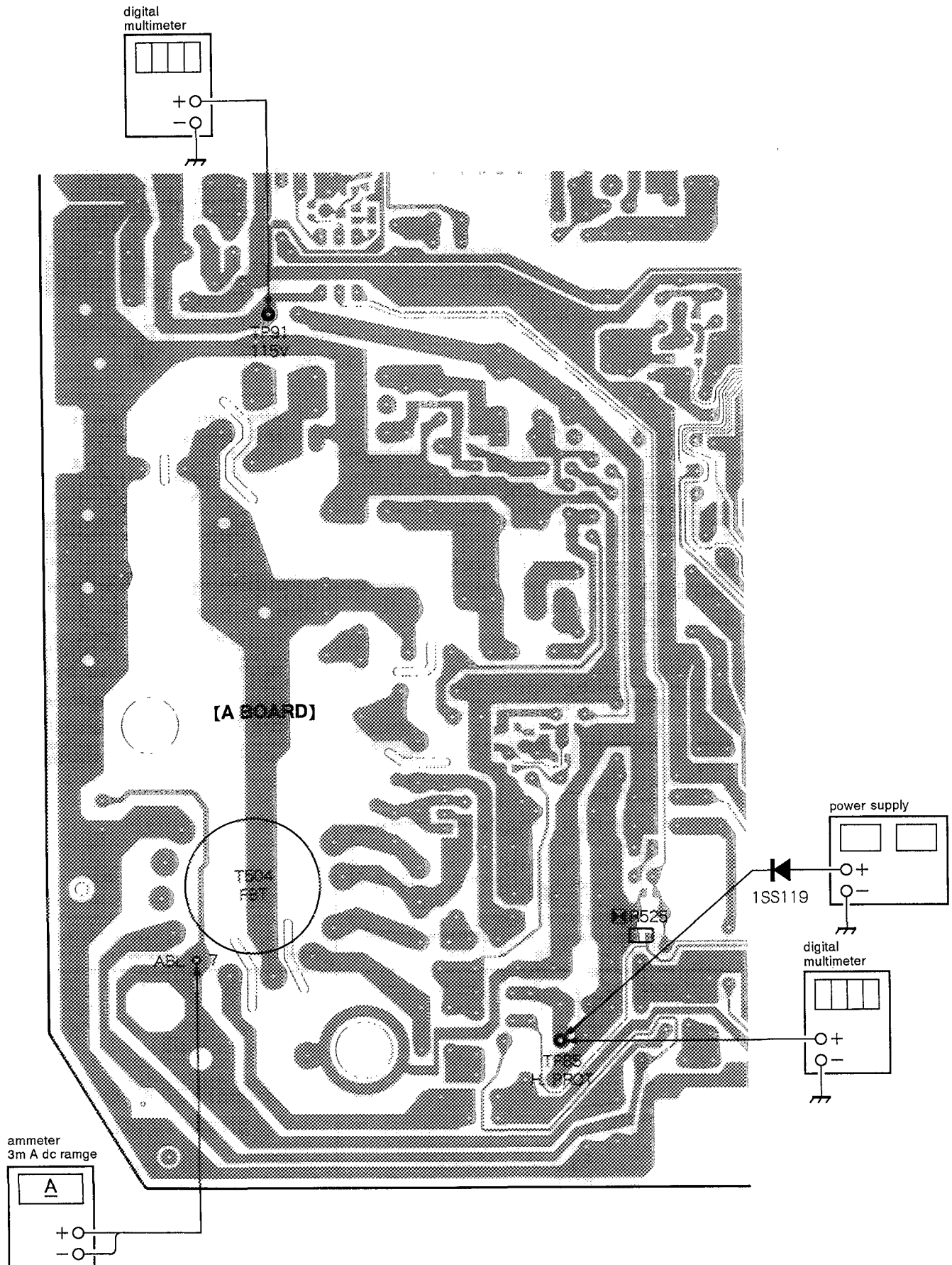


B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

The following adjustments should always be performed when replacing the following components. (marked with ☒ on the schematic diagram).

IC101, IC601, Q609, R030, R617, R618, R629, R630, R636, R637

- 1) Supply $130 \pm 2\%$ V AC to with variable autotrans-former.
- 2) Input an entirely monoscope signal.
- 3) Set the PICTURE control and the BRIGHT controls in to initial reset.
- 4) Set to Service adjustment Mode.
- 5) Select PADJ with [1] and [4].
- 6) Adjust with [6] for the 63 level.
- 7) Confirm the voltage of A BOARD TP91 is less than 123.0V DC.
- 8) If step 7) is not satisfied, replace the components repeat above steps.
- 9) Supply 120 ± 2.0 V AC to with variable auto trans former.
- 10) Adjust with [3] and [6] for the 115 ± 0.5 V DC.
- 11) Write into the memory by pressing **MUTING** then **ENTER**.



SECTION 5 CIRCUIT ADJUSTMENTS

5-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use of Remote Commander (RM-Y116/Y123) can be performed circuit adjustments about this model.

NOTE : Test Equipment Required.

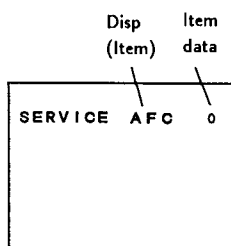
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC

1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

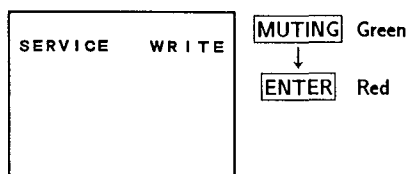
1. Standby mode.(Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander. (Press each button within a second.)

SERVICE ADJUSTMENT MODE IN

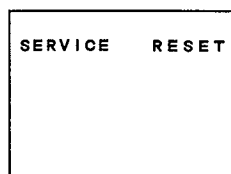


3. The CRT displays the item Being adjusted.
4. Press **1** or **4** on the Remote Commander to select the item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **MUTING** then **ENTER** to write into memory.

SERVICE ADJUSTMENT MODE MEMORY



7. Press **8** then **ENTER** on the Remote Commander to initialize.



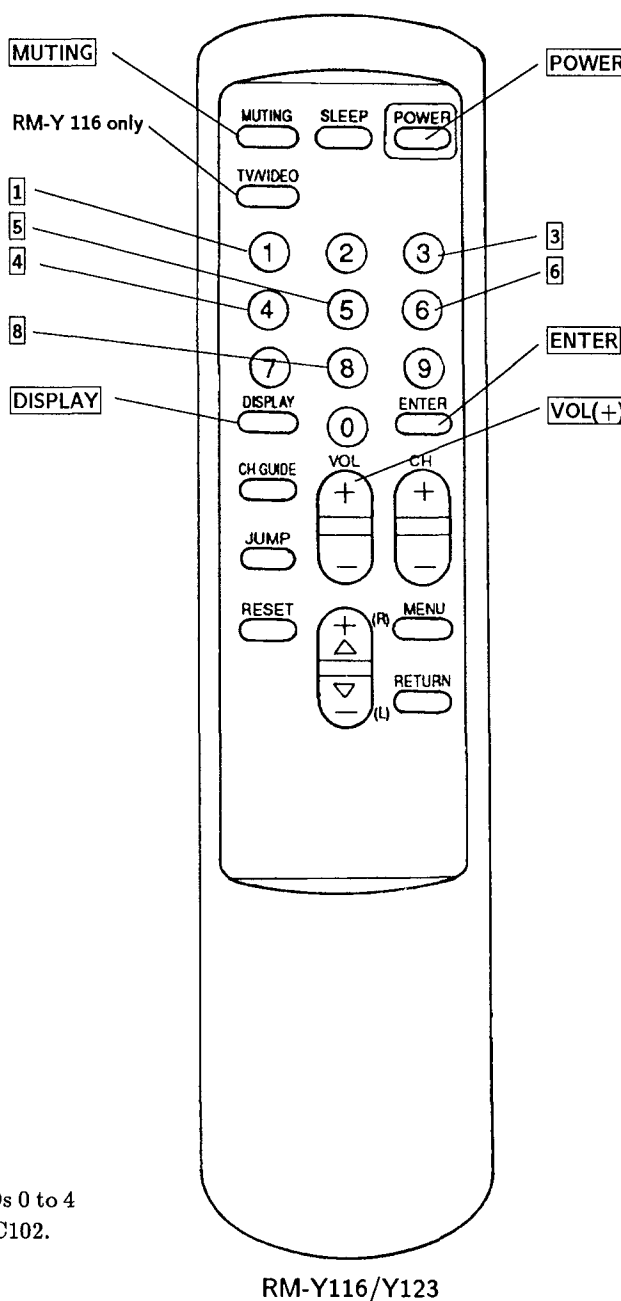
Carry out step 7) when adjusting IDs 0 to 4 and when replacing and adjusting IC102.

Factory original setting

2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again, confirm they were adjusted.

3. ADJUST BUTTONS AND INDICATOR



8. Turn set off and on to exit.

4. AN ITEM OF ADJUSTMENTS

No.	Disp.	Item	Data range	Ave. data
1	AFC	AFC Loop Gain	0~3	* 0
2	HFRE	H. Frequency	0~127	78
3	VFRE	V. Frequency	0~31	15
4	VPOS	V. Center	0~31	18
5	VSIZ	V. Size	0~63	16
6	VLIN	V. Linearity	0~15	9
7	VSCO	V. Correction	0~15	6
8	HPOS	H. Center	0~15	5
9	VCOM	V. Compensation	0~7	* 2
10	GAMP	Green Amp	0~31	19
11	BAMP	Blue Amp	0~31	19
12	GCUT	Green Cut Off	0~15	8
13	BCUT	Blue Cut Off	0~15	7
14	CROM	Chroma Trap	0~63	26
15	SPIX	Sub Contrast	0~63	24
16	SHUE	Sub Hue	0~63	25
17	SCOL	Sub Color	0~63	30
18	SBRT	Sub Bright	0~63	25
19	SVOL	Sub Volume	0~15	* 0
20	SHAP	Sharpness	0~15	* 7
21	VSMO	V Pull in Range	0, 1	* 0
22	REF	Refference line	0~3	* 2
23	ROFF	Red Out	0, 1	—
24	GOFF	Green Out	0, 1	—
25	BOFF	Blue Out	0, 1	—
26	ABLM	ABL Mode	0, 1	* 0
27	NOTC	Notch On/Off	0, 1	—
28	DRGB	OSD intensity	0, 1	* 0
29	DISP	Display Position	0~63	4
30	PADJ	Plus B Adjust	0~63	43
31	ID-0	Model ID	0~127	by Model
32	ID-1	Model ID	0~127	by Model
33	ID-2	Model ID	0~127	by Model
34	ID-3	Model ID	0~127	by Model
35	ID-4	Model ID	0~127	by Model

Note : No. from 1 to 35 is to show adjustment order.

SERVICE ID 0 64

Note : IC101 of the A circuit board inputs a V sync signal to pin ⑤, and is always in operation. If on V sync signal is input to pin ⑤, there will be a waiting period of 2-4 seconds, and the power is shut off. When entering the service mode, the above function is cancelled and operation is possible.

* : Set-up value

Please adjust the function values as shown below when IC 102 on A board was replaced.

KV-13M10

No.	Disp.	Data
31	ID-0	64
32	ID-1	8
33	ID-2	64
34	ID-3	1
35	ID-4	16

KV-MT1300

No.	Disp.	Data
31	ID-0	0
32	ID-1	8
33	ID-2	64
34	ID-3	1
35	ID-4	16

KV-14R10

No.	Disp.	Data
31	ID-0	64
32	ID-1	8
33	ID-2	32
34	ID-3	1
35	ID-4	16

KV-1460R

No.	Disp.	Data
31	ID-0	0
32	ID-1	8
33	ID-2	32
34	ID-3	1
35	ID-4	16

5-2. A BOARD ADJUSTMENTS

RF AGC ADJUSTMENT (IF BLOCK VR)

1. Input a color-bar signal.
2. Adjust AGC VR of TU 101 so that snow noise and cross-modulation disappear from the picture.
3. Confirm them at every channel.

H.FREQUENCY ADJUSTMENT (HFRE)

1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Connect a frequency counter to base of Q 550 (TP-86 H.DRIVE).
4. Call the item of AFC, set to 3 level (free run).
5. Select HFRE with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the 15734 ± 60 Hz.
7. Call the item of AFC again, adjust the level "0".
8. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

V.FREQUENCY ADJUSTMENT (VFRE)

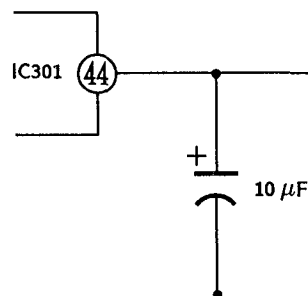
KV-13M10/14R10 only

1. Select video 1 with no connecting the signal.
2. Set to Service adjustment Mode.
3. Connect the frequency counter across connector VDY (+) (CN501) connector and ground.
4. Select VFRE with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the 55 ± 0.5 Hz.
6. Write the memory by pressing **[MUTING]** then **[ENTER]**.

V.FREQUENCY ADJUSTMENT (VFRE)

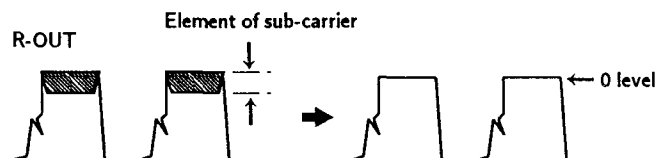
KV-MT1300/1460R only

1. Connect a capacitor (10 μ F) across pin ④ of IC 301 (V. SYNC) and ground.
2. Set to Service adjustment Mode.
3. Connect the frequency counter across connector VDY (+) (CN501) connector and ground.
4. Select VFRE with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the 55 ± 0.5 Hz.
6. Write the memory by pressing **[MUTING]** then **[ENTER]**.
7. Disconnect a capacitor from IC 301.



CROMA TRAP ADJUSTMENT (CROM)

1. Input a red signal
2. Set to Service adjustment Mode.
3. Connect an oscilloscope CN703 Pin ① (R OUT) of C board ground.
4. Select CROM with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the 0 level.



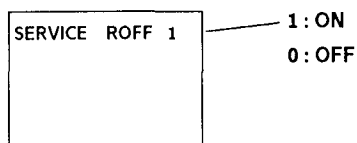
6. Write the memory by pressing **[MUTING]** then **[ENTER]**.

SUB CONTRAST ADJUSTMENT (SPIX)

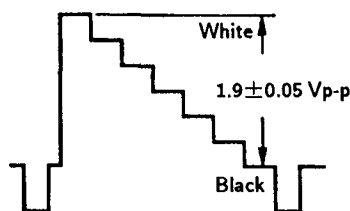
1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Set the conditions as follows.

PICTURE MAX
COLOR MIN
BRIGHT MIN

R OFF ON (1)
G OFF OFF (0)
B OFF OFF (0)



4. Connect an oscilloscope to CN703 Pin① (R OUT) of C board and ground.
5. Select SPIX with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the 1.9 ± 0.05 Vp-p.

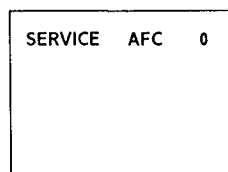


7. Write the memory by pressing **MUTING** then **ENTER**.
8. Return the following back to normal after adjustment.

PICTURE MAX
BRIGHT CENTER
COLOR CENTER
R OFF ON
G OFF ON
B OFF ON

DISPLAY POSITION ADJUSTMENT (DISP)

1. Input a color-bar signal.
2. Set to service adjustment Mode.
3. Select DISP with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the bar center.
5. Write the memory by pressing **MUTING** then **ENTER**.
6. Check if the text is displayed on the screen.

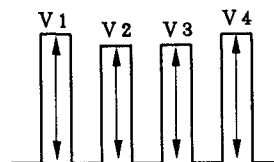


SUB BRIGHT ADJUSTMENT (SBRT)

1. Input a cross-hatch signal.
2. Set to service adjustment mode.
3. Set the PICTURE and BRIGHT to minimum.
4. Select SBRT with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for obtain a faintly visible cross-hatch.
6. Write into the memory by pressing **MUTING** then **ENTER**.

SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

1. Input a color-bar signal.
2. Set to service adjustment Mode.
3. Connect an oscilloscope to CN703 Pin③ (B OUT) of C board.
4. Select SHUE and SCOL with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the $V1=V4$ (SCOR) and $V2=V3$ (SHUE).

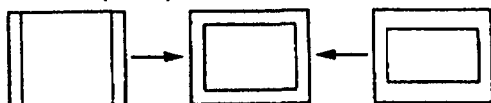


6. Write into the memory by pressing **MUTING** then **ENTER**.

V.SIZE ADJUSTMENT (VSIZ)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select VSIZ with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical size.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

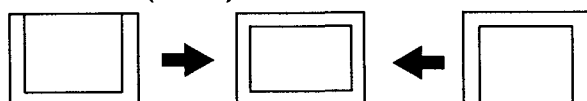
V. SIZE (VSIZ)



V.CENTER ADJUSTMENT (VPOS)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select VPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

V. CENTER (VPOS)

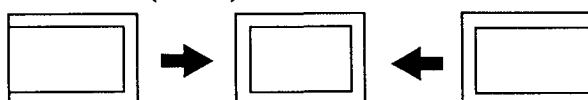


H.CENTER ADJUSTMENT (H POS)

Note: Perform this adjustment after H.FREQUENCY ADJUSTMENT (HFRE).

1. Input a cross-hatch signal.
2. Set the Service adjustment mode.
3. Select HPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** to the best horizontal center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

H. CENTER (HPOS)



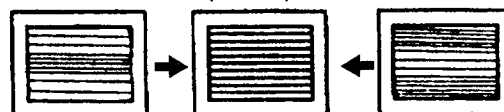
V LINEARITY (VLIN) AND V CORRECTION (VSCO) ADJUSTMENTS

1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Select VLIN and VSCO with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best picture.
5. Write the memory by pressing **[MUTING]** then **[ENTER]**.

V LINEARITY (VLIN)

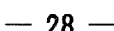


V CORRECTION (VSCO)



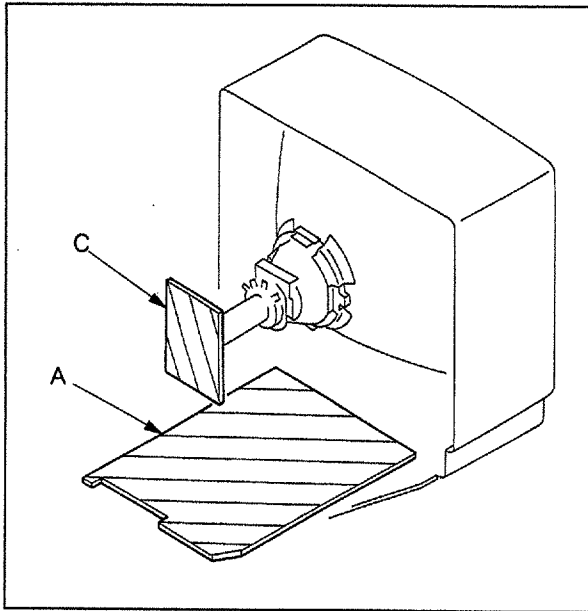
MEMO

SECTION 6 DIAGRAMS



KV-13M10/MT1300/
RM-Y116 RM-Y123
KV-14R10/1460R
RM-Y116 RM-Y123

6-2. CIRCUIT BOARDS LOCATION



6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in μF unless otherwise noted.
- pF: μF 50WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm

Rating electrical power 1/4W

- All resistors are in ohms.
- $k\Omega=1000\Omega$, $M\Omega=1000K\Omega$
- : nonflammable resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R525 on Page 17, 18.)
- When replacing the part in below table be sure to perform the related adjustment.

Part replaced (▣)	Adjustment (⊠)
IC502, IC601, Q554, Q555, D505, D506, D507, D510, DY, C511, C513, C528, C531, R511, R519, R520, R523, R525, R527, R557, R558, R559, R560, R617, R618, T504(FBT)	HV HOLD-DOWN (R525)
IC101, IC601, Q609, R030, R617, R618, R629, R630, R636, R637	B+ VOLTAGE CONFIRMATION

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 M Ω digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.

: B+ Line.

: signal path.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The symbol display is on the component side.

The components identified by shading and mark are critical for safety. Replace only with part number specified.

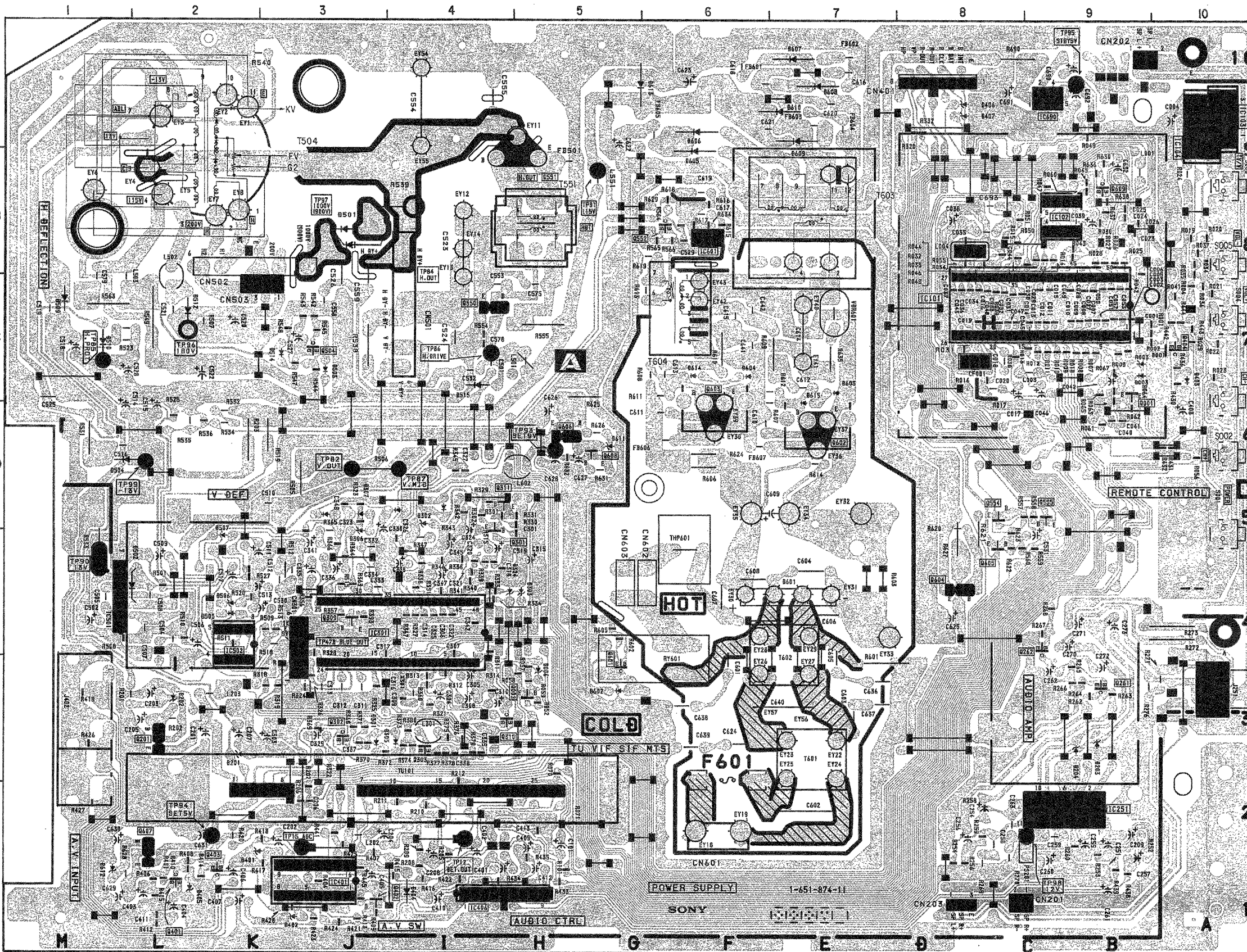
The symbol indicate fast operating fuse. Replace only with fuse of same rating as marked.

Note: Les composants identifiés par un tramé et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole indique une fusible a action rapide. Doit être remplacée par une fusible de même valeur, comme maque.

A TUNING CONTROL, Y/C/J, POWER SUPPLY, DEFLECTION, TUNER/IF, AUDIO MTS

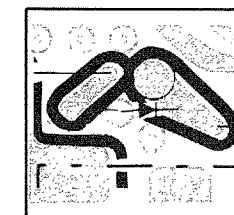
- A BOARD -



IC	DIODE
IC101 C-8	D001 C-9
IC102 B-9	D003 C-9
IC103 A-10	D201 F-2
IC251 G-9	D302 D-4
IC301 E-3	D401 G-2
IC401 G-3	D403 C-10
IC501 E-1	D405 G-2
IC502 E-2	D501 B-3
IC601 B-6	D502 E-2
IC690 A-9	D503 C-3
	D504 D-1
	D505 E-2
	D506 E-2
	D507 E-2
	D509 C-1
	D510 C-1
	D512 C-2
	D514 C-3
	D515 C-4
	D601 E-7
	D602 F-5
	D603 C-7
	D604 C-6
	D605 A-6
	D606 A-6
	D607 A-7
	D608 A-7
	D609 A-7
	D610 A-7
	D611 D-5
	D612 G-1
	D613 A-6
	D614 C-6
	D615 C-7

TRANSISTOR

Q001 C-9	
Q201 F-2	
Q261 F-9	
Q262 E-9	
Q301 D-4	
Q310 F-4	
Q401 G-2	
Q402 G-3	
Q403 G-2	
Q404 C-10	
Q504 C-3	
Q550 C-4	
Q551 A-5	
Q554 D-8	
Q555 D-9	
Q601 F-5	
Q602 D-7	
Q603 C-6	
Q604 E-8	
Q605 E-8	
Q606 D-5	
Q607 G-2	
Q608 D-5	



NOTE:

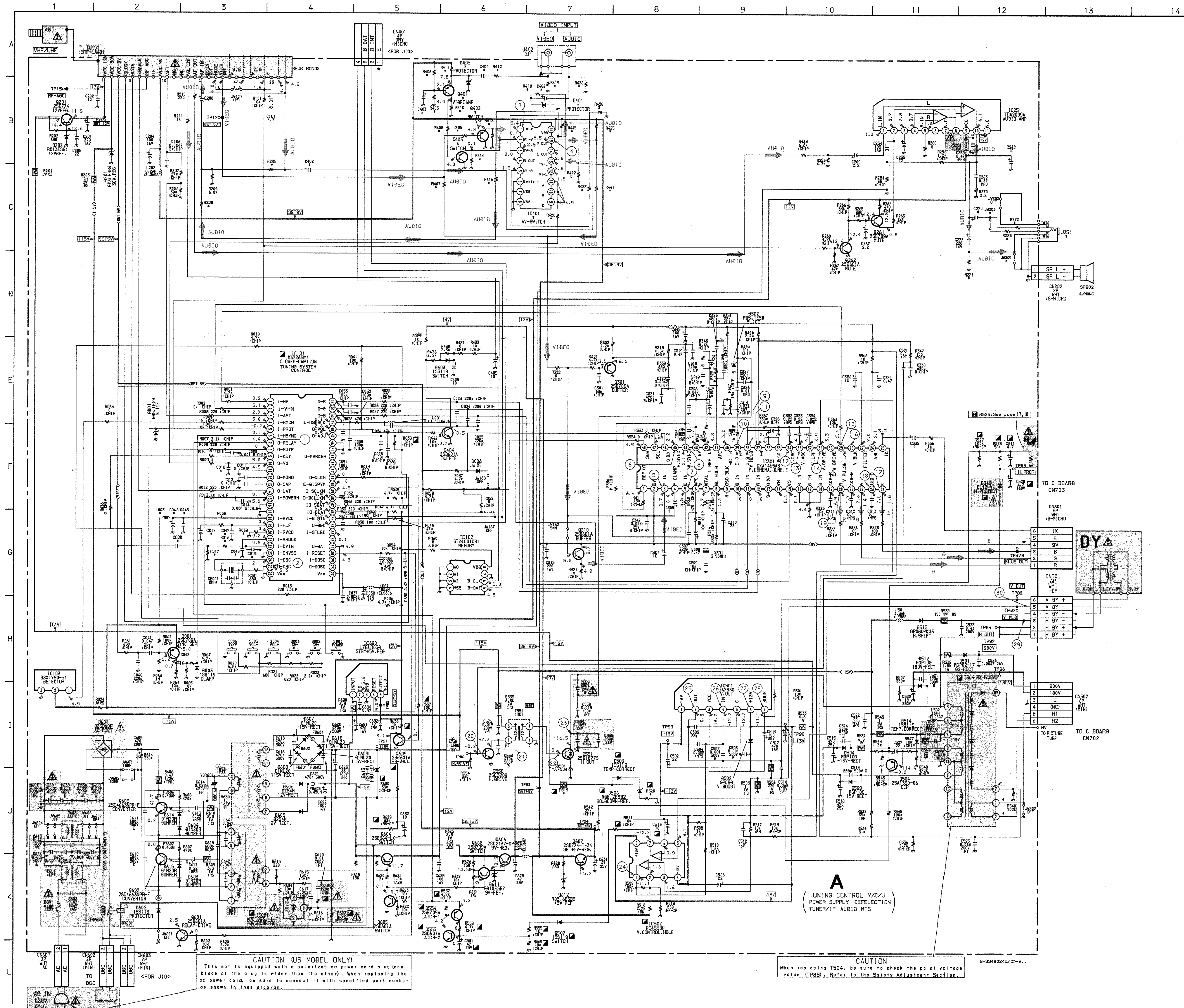
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

A BOARD * MARK

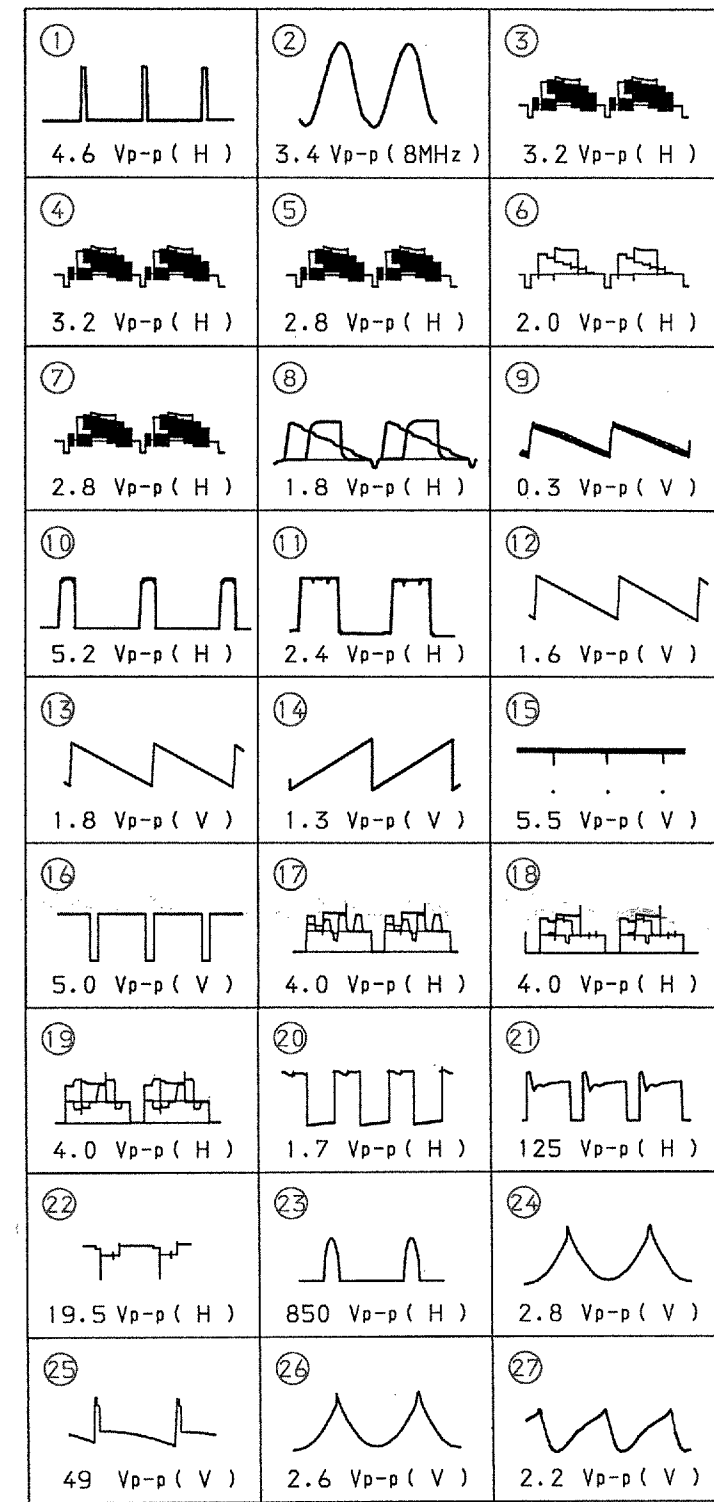
Ref. No.	Location	KV-1300	KV-13M10	KV-14R10	KV-1460R
C010	F-3	-	0.001	0.001	-
C017	F-3	1	-	-	-
C019	G-3	560p	560p	-	-
C020	G-2	0.1	0.1	-	-
C045	F-2	2200p	2200p	-	-
C046	F-2	47 25V	47 25V	-	-
C047	F-3	100p	100p	-	-
C048	G-3	1000p	1000p	-	-
C270	C-12	-	10	10	-
C402	B-4	-	1	1	-
C403	A-5	-	10	10	-
C404	A-6	-	100 16V	100 16V	-
C406	A-7	-	1	1	-
D401	A-7	-	RD13ESB	RD13ESB	-
D405	A-7	-	RD13ESB	RD13ESB	-
IC401	B-7	-	MC14053BCP	MC14053BCP	-
J251	C-12	-	O	O	-
J402	A-7	-	2P	2P	-
JW201	C-12	5MM	-	-	5MM
JW203	C-12	-	5MM	5MM	-
L003	F-2	100 μH	100 μH	-	-
Q401	A-6	-	2SB709A	2SB709A	-
Q402	B-6	-	2SB709A	2SB709A	-
Q403	B-6	-	2SB709A	2SB709A	-
R009	F-3	-	220	220	-
R016	G-3	470	470	-	-
R017	G-3	1M	1M	-	-
R038	F-3	1k	1k	-	-
R039	G-3	15k	15k	-	-
R205	B-3	4.7k	-	-	4.7k
R208	C-3	-	4.7k	4.7k	-
R271	C-11	-	1k	1k	-
R272	C-11	-	330	330	-
R273	C-11	-	330	330	-
R405	A-5	-	15k	15k	-
R406	A-5	-	5.6k	5.6k	-
R407	B-6	100	-	-	100
R408	B-6	-	0	0	-
R409	B-6	-	0	0	-
R410	B-6	-	1k	1k	-
R411	A-6	-	470	470	-
R412	A-6	-	470	470	-
R413	B-6	-	100k	100k	-
R414	B-6	-	100k	100k	-
R415	B-6	-	0	0	-
R418	A-7	-	1k	1k	-
R419	A-7	-	82	82	-
R420	C-7	-	1k	1k	-
R423	B-7	-	1k	1k	-
R425	B-7	-	3.3k	3.3k	-
R426	A-7	-	470k	470k	-
R441	B-7	-	100	100	-
R445	B-7	-	22k	22k	-

O: TO BE MOUNT

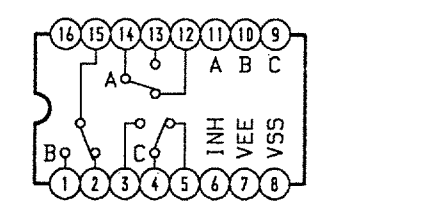
-: NOT MOUNT



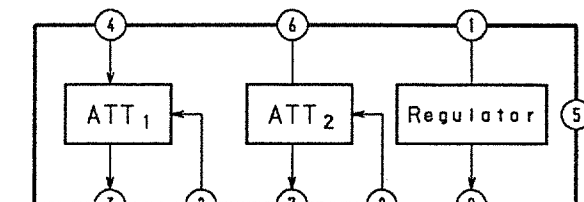
A BOARD WAVEFORMS



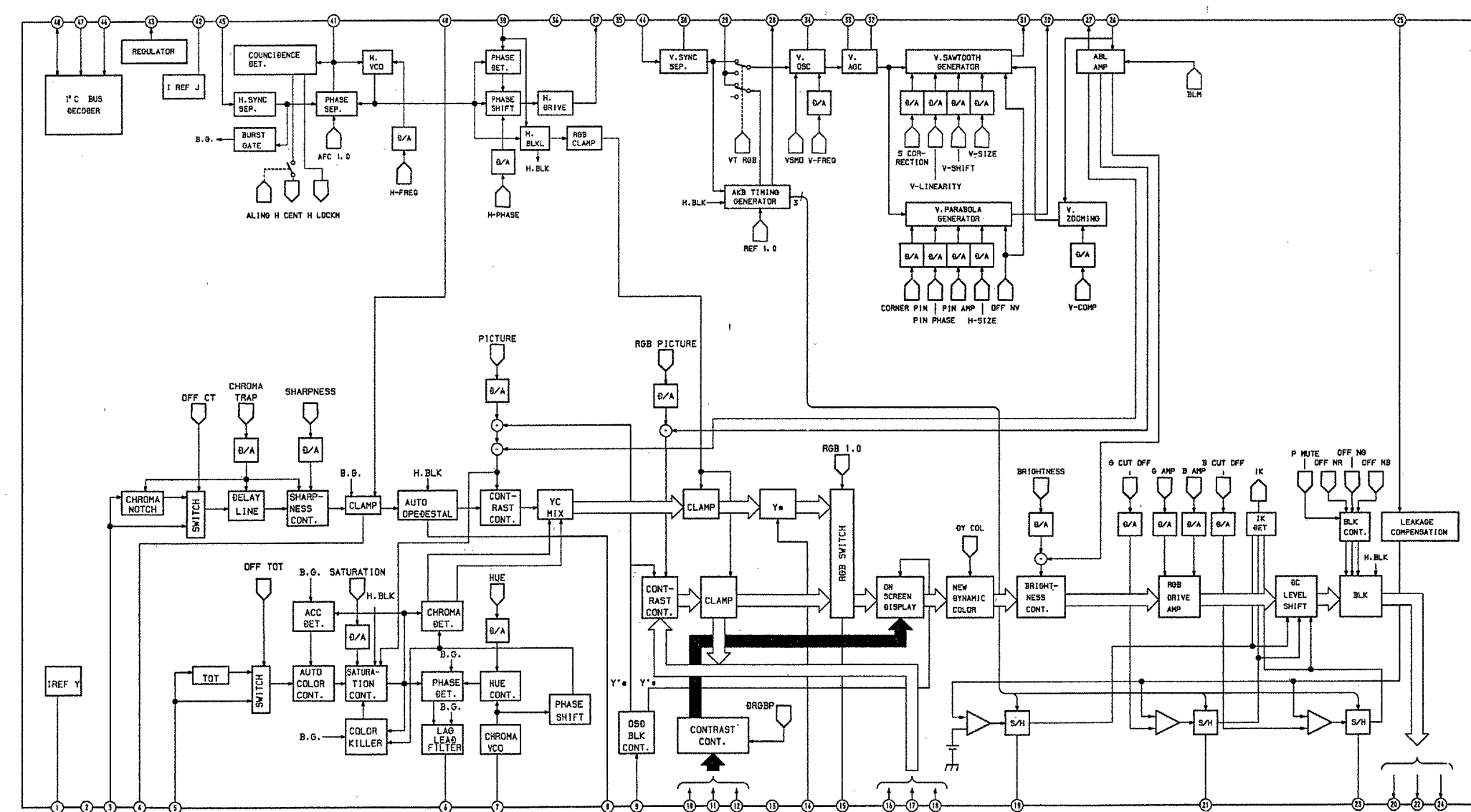
A BOARD IC401 MC14053BCP



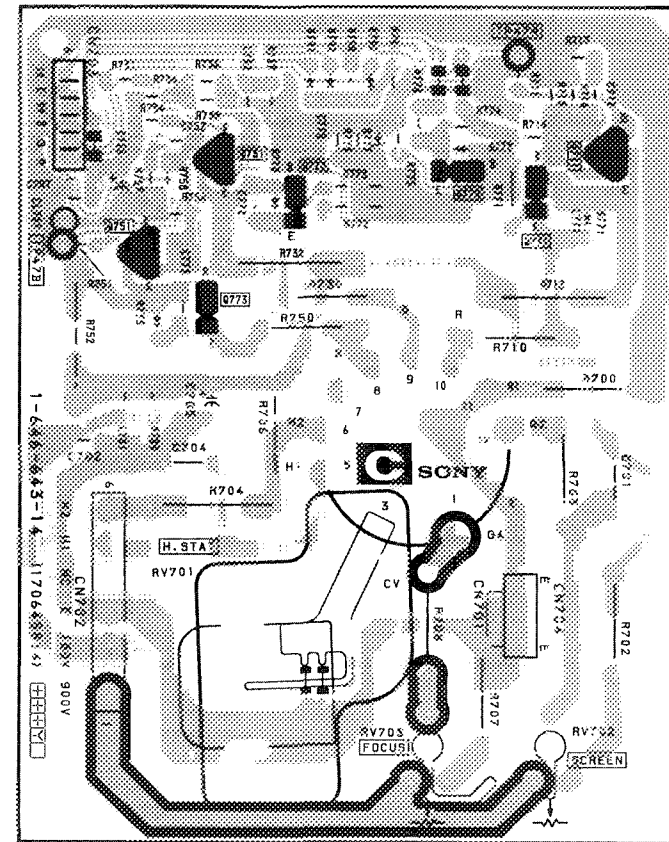
A BOARD IC406 μ PC1406HA



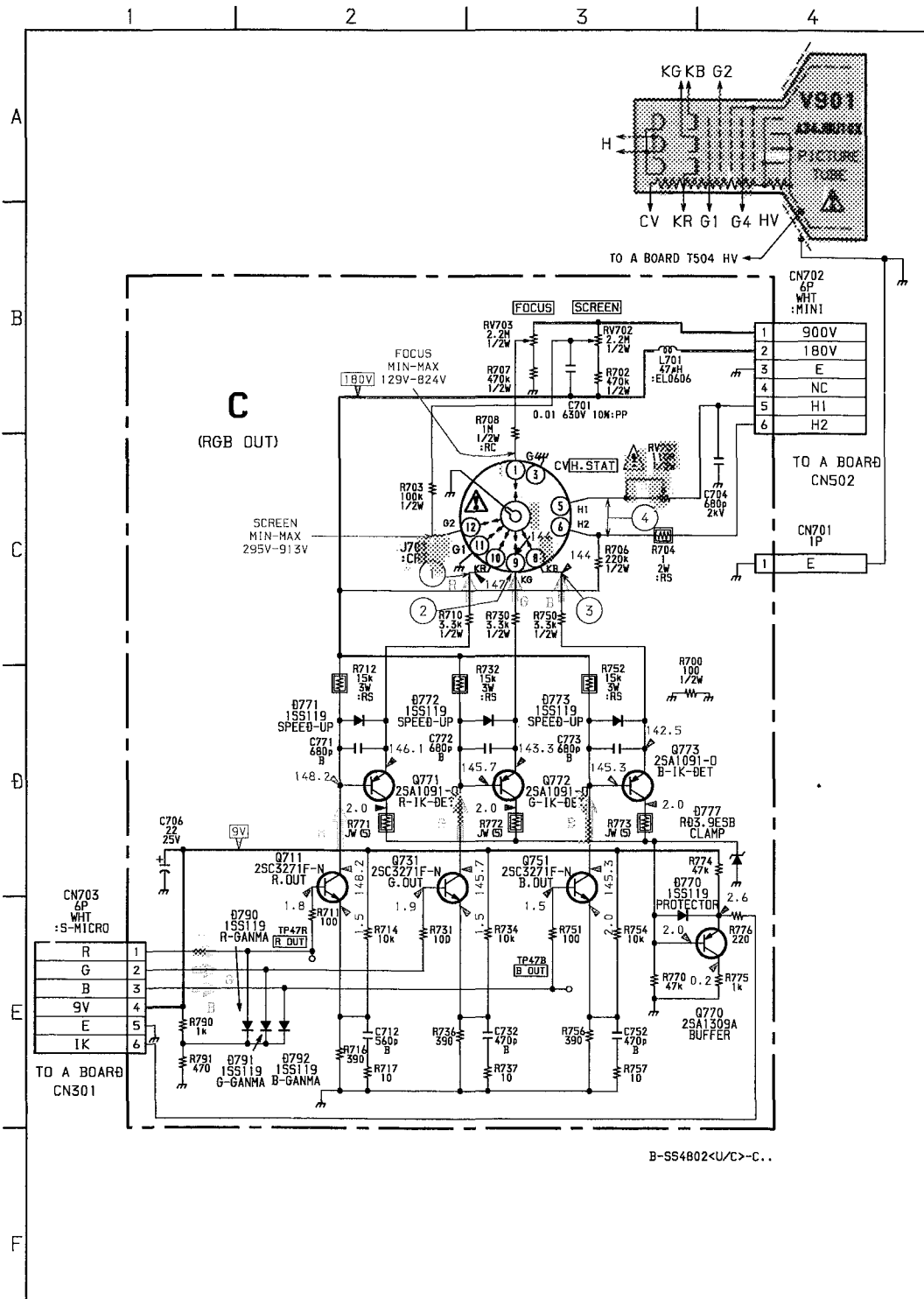
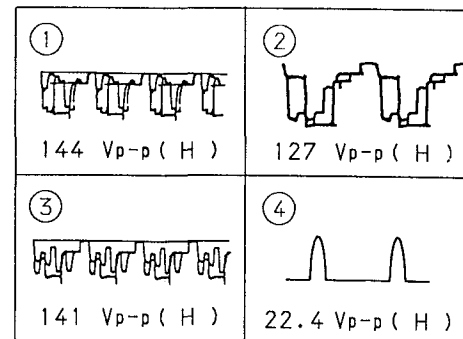
A BOARD IC301 CXA1465AS



— C BOARD —

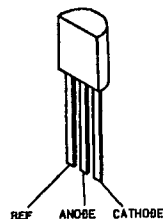


• C BOARD WAVEFORMS

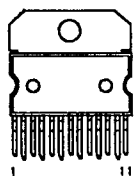


6-4. SEMICONDUCTONS

AN1431T



T0A2009A



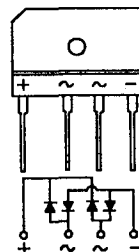
2SC4663NPR-F



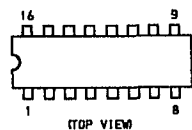
02S4MF



03SB60F



BU4053BC
HC14053BFP
MC14053BCP
μP04053BC



μPC1406HA



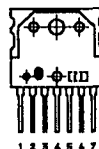
2S01877S-SONY-CA



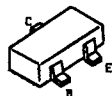
2SA1091-0



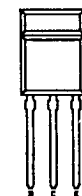
LA7830



2SA1037K
2SA1162-G/2SA
2SB709A-QRS-TX
2S0601A-Q



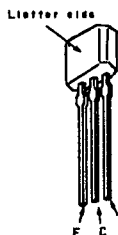
2S02137-OP



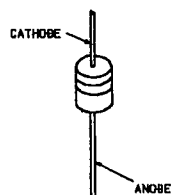
L78LR050-MA



2SA1175
2SA1309A



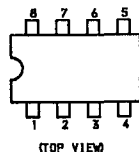
01N20R R03.9ESB2
R010ESB2 R05.1ESB1
R013ESB1 R05.6ESB2
R013ESB2 R06.8ESB2
R030ESB2 1SS119
R030ESB4 1SS119T0
R036ESB2



M37265M4-SV4812



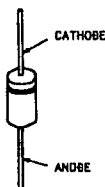
RC4558P
ST24C01B1
μPC4558P



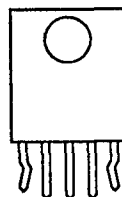
2SB564
2SB733-34
2SC3209LK
2S0774-34



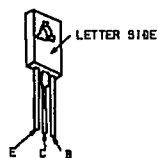
01NL20
EL1Z
GP080
RGP02-17PKG23



SBX1790-51



2SC2611
2SC3271F-N



SECTION 7 EXPLODED VIEW

NOTE:

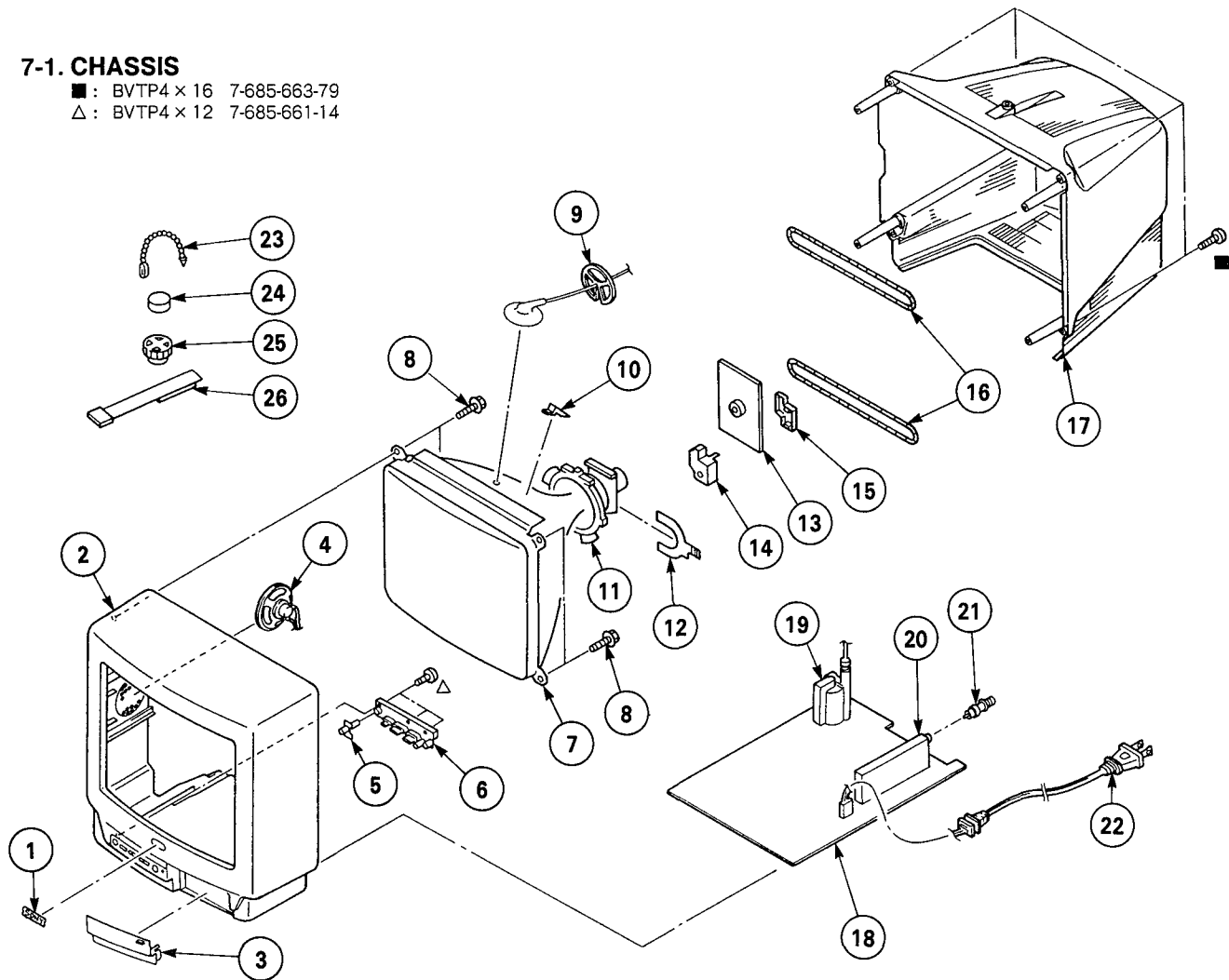
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié

7-1. CHASSIS

- : BVTP4 × 16 7-685-663-79
△: BVTP4 × 12 7-685-661-14



(KV-13M10/14R10 only)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-393-157-01	EMBLEM (NO.6), SONY		13	*A-1331-346-A	C BOARD, COMPLETE	
2	X-4031-909-1	CABINET ASSY (WITE BEZEL ASSY)	3 (KV-13M10)	14	*A-374-912-01	COVER (MAIN), CV VOL	
	X-4031-933-1	CABINET ASSY (WITE BEZEL ASSY)	3 (KV-14R10)	15	*A-374-913-01	COVER (REAR LID), CV VOL	
	4-044-855-01	CABINET (WITE BEZEL) (KV-1460R)		16	Δ 1-428-146-31	COIL, DEMAGNETIZATION	
3	4-044-856-01	DOOR, CONTROL (KV-13M10/14R10)		17	4-044-857-01	COVER, REAR	
4	1-504-256-11	SPEAKER (8CM)		18	*A-1297-261-A	A BOARD, COMPLETE (KV-13M10)	
5	4-039-846-01	FILTER, REMOTE			*A-1297-307-A	A BOARD, COMPLETE (KV-1460R)	
6	4-039-849-01	BUTTON, MULTI			*A-1297-311-A	A BOARD, COMPLETE (KV-14R10)	
7	Δ 8-735-561-05	PICTURE TUBE (A34JRU10X)			*A-1297-364-A	A BOARD, COMPLETE (KV-MT1300)	
8	4-041-267-01	SCREW (5), TAPPING		19	Δ 1-453-142-11	TRANSFORMER ASSY, FLYBACK (KV-1702A5)	
9	*3-704-372-01	HOLDER, HV CABLE		20	Δ 8-598-047-00	TUNER BPF-LANDI	
10	4-041-361-01	SPACER, DEFLECTION YOKE		21	1-766-374-11	PLUG, F-PIN	
11	Δ 8-451-418-11	DEFLECTION YOKE YLANDX2		22	Δ 1-765-486-11	CORD, POWER (WITH CONNECTOR) 10A/125V	
12	1-452-277-00	MAGNET, BMC		23	4-308-870-00	CLIP, LEAD WIRE	
				24	1-452-032-00	MAGNET, DISK; 10 MM ϕ	
				25	1-452-094-00	MAGNET, ROTATABLE DISK; 15 MM ϕ	
				26	X-4308-815-0	PERMALLOY ASSY, CONVERGENCE	

SECTION 8 ELECTRICAL PARTS LIST

KV-13M10/MT1300/
RM-Y116 RM-Y123
KV-14R10/1460R
RM-Y116 RM-Y123

A

NOTE:

The components identified by shading and mark  are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité
Ne les remplacer que par une pièce portant le numéro spécifié.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

• All resistors are in ohms
• F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

• MF : μ F, PF : μ μ F

COILS

• MMH : mH, UH : μ H

• The components identified by  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
*A-1297-261-A	A BOARD, COMPLETE (KV-13M10)			C201	1-126-934-11	ELECT 220MF	20% 16V
*A-1297-307-A	A BOARD, COMPLETE (KV-1460R)			C202	1-126-964-11	ELECT 10MF	20% 50V
*A-1297-311-A	A BOARD, COMPLETE (KV-14R10)			C204	1-126-933-11	ELECT 100MF	20% 16V
*A-1297-364-A	A BOARD, COMPLETE (KV-MT1300)			C205	1-126-233-11	ELECT 22MF	20% 50V
4-382-854-11	SCREW (M3X10), P, SW (+)			C206	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
<CAPACITOR>				C208	1-124-903-11	ELECT 1MF	20% 50V
C001	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C209	1-124-925-11	ELECT 2.2MF	20% 50V
C008	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C254	1-126-933-11	ELECT 100MF	20% 16V
C010	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C255	1-126-233-11	ELECT 22MF	20% 50V
C011	1-216-295-00	METAL GLAZE 0 5% 1/10W	(KV-13M10/14R10)	C259	1-136-173-00	FILM 0.47MF	5% 50V
C012	1-216-295-00	METAL GLAZE 0 5% 1/10W		C260	1-126-964-11	ELECT 10MF	20% 50V
C014	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C262	1-124-925-11	ELECT 2.2MF	20% 50V
C017	1-124-903-11	ELECT 1MF	20% 50V	C263	1-136-169-00	FILM 0.22MF	5% 50V
C019	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	C270	1-126-964-11	ELECT 10MF	20% 50V
C020	1-137-399-11	FILM 0 1MF	(KV-13M10/MT1300)	C272	1-126-934-11	ELECT 220MF	20% 16V
C023	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C301	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C024	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C304	1-126-964-11	ELECT 10MF	20% 50V
C025	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C305	1-124-903-11	ELECT 1MF	20% 50V
C026	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C306	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C027	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C307	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C028	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C308	1-124-902-00	ELECT 0.47MF	20% 50V
C030	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C309	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C034	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C310	1-126-233-11	ELECT 22MF	20% 50V
C037	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C311	1-137-399-11	FILM 0.1MF	5% 50V
C038	1-126-935-11	ELECT 470MF	20% 16V	C312	1-137-399-11	FILM 0.1MF	5% 50V
C040	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C313	1-137-399-11	FILM 0.1MF	5% 50V
C041	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C314	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C042	1-124-903-11	ELECT 1MF	20% 50V	C315	1-126-934-11	ELECT 220MF	20% 16V
C043	1-216-295-00	METAL GLAZE 0 5% 1/10W		C318	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C045	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C319	1-124-902-00	ELECT 0.47MF	20% 50V
C046	1-104-664-11	ELECT 47MF	20% 25V	C320	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C047	1-163-117-00	CERAMIC CHIP 100PF	(KV-13M10/MT1300)	C321	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C048	1-163-009-11	CERAMIC CHIP 0.001MF	(KV-13M10/MT1300)	C322	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C050	1-163-117-00	CERAMIC CHIP 100PF	(KV-13M10/MT1300)	C323	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C051	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C324	1-124-903-11	ELECT 1MF	20% 50V
C052	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C325	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C053	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C326	1-137-370-11	FILM 0.01MF	5% 50V
C101	1-124-927-11	ELECT 4.7MF	20% 50V	C327	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
				C328	1-124-902-00	ELECT 0.47MF	20% 50V
				C330	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
				C332	1-136-169-00	FILM 0.22MF	5% 50V
				C333	1-136-169-00	FILM 0.22MF	5% 50V
				C334	1-137-372-11	FILM 0.022MF	5% 50V
				C335	1-124-903-11	ELECT 1MF	20% 50V
				C336	1-126-964-11	ELECT 10MF	20% 50V
				C341	1-124-902-00	ELECT 0.47MF	20% 50V
				C342	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
				C345	1-126-933-11	ELECT 100MF	20% 16V
				C347	1-126-933-11	ELECT 100MF	20% 16V

A

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REF.NO.	PART NO	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C348	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C623	1-123-024-21	ELECT 33MF	160V
C402	1-124-903-11	ELECT 1MF	20% 50V (KV-13M10/14R10)	~~C624 A 1-161-741-71~~	~~CERAMIC 1000PF~~	~~10% 400V~~	
C403	1-126-964-11	ELECT 10MF	20% 50V (KV-13M10/14R10)	C625	1-126-933-11	ELECT 100MF	20% 16V
C404	1-126-933-11	ELECT 100MF	20% 16V (KV-13M10/14R10)	C628	1-104-664-11	ELECT 47MF	20% 25V
C406	1-124-903-11	ELECT 1MF	20% 50V (KV-13M10/14R10)	C631	1-104-664-11	ELECT 47MF	20% 25V
C408	1-126-964-11	ELECT 10MF	20% 50V	C632	1-126-964-11	ELECT 10MF	20% 50V
C409	1-126-964-11	ELECT 10MF	20% 50V	~~C635 A 1-161-741-71~~	~~CERAMIC 1000PF~~	~~10% 400V~~	
C501	1-137-399-11	FILM 0.1MF	5% 50V	~~C637 A 1-161-741-71~~	~~CERAMIC 1000PF~~	~~10% 400V~~	
C502	1-126-233-11	ELECT 22MF	20% 50V	~~C638 A 1-161-741-71~~	~~CERAMIC 1000PF~~	~~10% 400V~~	
C504	1-130-489-00	FILM 0.033MF	5% 50V	~~C639 A 1-161-741-71~~	~~CERAMIC 1000PF~~	~~10% 400V~~	
C505	1-164-058-11	CERAMIC 33PF	5% 50V	~~C640 A 1-136-311-51~~	~~FILM 0.47MF~~	~~20% 125V~~	
C506	1-126-233-11	ELECT 22MF	20% 50V	C641	1-137-374-11	FILM 0.047MF	5% 50V
C507	1-102-038-00	CERAMIC 0.001MF	500V	C642	1-137-374-11	FILM 0.047MF	5% 50V
C508	1-102-038-00	CERAMIC 0.001MF	500V	C690	1-124-902-00	ELECT 0.47MF	20% 50V
C509	1-126-948-11	ELECT 100MF	20% 35V	C691	1-126-935-11	ELECT 470MF	20% 16V
C510	1-108-702-11	MYLAR 0.068MF	10% 100V	C692	1-104-664-11	ELECT 47MF	20% 25V
C511	1-124-927-11	ELECT 4.7MF	20% 50V	C693	1-136-173-00	FILM 0.47MF	5% 50V
C512	1-164-096-11	CERAMIC 0.01MF	50V	<CONNECTOR>			
C513	1-126-964-11	ELECT 10MF	20% 50V	CN202	1-564-505-11	PLUG, CONNECTOR 2P	
C514	1-104-664-11	ELECT 47MF	20% 25V	CN301	*1-564-509-11	PLUG, CONNECTOR 6P	
C515	1-126-941-11	ELECT 470MF	20% 25V	CN401	*1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P	
C516	1-102-244-00	CERAMIC 220PF	10% 500V	CN501	*1-580-798-11	CONNECTOR PIN (DY) 6P	
C517	1-126-935-11	ELECT 470MF	20% 16V	CN502	1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
C518	1-126-941-11	ELECT 470MF	20% 25V	CN601	*1-580-843-11	PIN, CONNECTOR (POWER)	
C519	1-102-244-00	CERAMIC 220PF	10% 500V	CN602	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
C520	1-107-652-91	ELECT 10MF	20% 250V	CN603	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
C521	1-102-244-00	CERAMIC 220PF	10% 500V	<DIODE>			
C522	1-123-024-21	ELECT 33MF	160V	D001	8-719-109-84	DIODE RD5.1ESB1	
C523	1-136-108-00	FILM 0.43MF	5% 200V	D003	8-719-911-19	DIODE 1SS119	
C525	1-106-387-00	MYLAR 0.068MF	10% 200V	D201	8-719-110-72	DIODE RD30ESB2	
C526	1-162-114-00	CERAMIC 0.0047MF	2KV	D302	8-719-109-84	DIODE RD5.1ESB1	
C527	1-126-233-11	ELECT 22MF	20% 50V	D401	8-719-110-36	DIODE RD13ESB2 (KV-13M10/14R10)	
C528	1-107-635-91	ELECT 4.7MF	20% 160V	D403	8-719-911-19	DIODE 1SS119	
C530	1-104-664-11	ELECT 47MF	20% 25V	D405	8-719-110-36	DIODE RD13ESB2 (KV-13M10/14R10)	
C531	1-104-664-11	ELECT 47MF	20% 25V	D501	8-719-028-72	DIODE RGP02-17EL-6433	
C553	1-102-228-00	CERAMIC 470PF	10% 500V	D502	8-719-908-03	DIODE GP08D	
~~C554 A 1-109-681-11~~	~~FILM 0.0057MF~~	~~3%~~	~~1.5KV~~	D503	8-719-911-19	DIODE 1SS119	
~~C555 A 1-162-116-91~~	~~CERAMIC 680PF~~	~~10%~~	~~2KV~~	D504	8-719-302-43	DIODE EL1Z	
C558	1-106-371-00	MYLAR 0.015MF	10% 100V	D505	8-719-911-19	DIODE 1SS119	
~~C559 A 1-162-115-91~~	~~CERAMIC 330PF~~	~~10%~~	~~2KV~~	D506	8-719-110-08	DIODE RD8.2ESB2	
C575	1-106-371-00	MYLAR 0.015MF	200V	D507	8-719-911-19	DIODE 1SS119	
~~C578 A 1-108-379-91~~	~~MYLAR 0.015MF~~	~~10%~~	~~100V~~	D509	8-719-302-43	DIODE EL1Z	
C601	A 1-161-741-71	CERAMIC 1000PF	10% 400V	~~D510 A 8-719-302-44~~	~~DIODE EL1Z-V1~~		
C602	A 1-136-311-51	FILM 0.47MF	20% 125V	D512	8-719-302-43	DIODE EL1Z	
C603	A 1-161-741-71	CERAMIC 1000PF	10% 400V	D514	8-719-911-19	DIODE 1SS119	
C605	A 1-161-741-71	CERAMIC 1000PF	10% 400V	D515	8-719-908-03	DIODE GP08D	
~~C606 A 1-161-741-71~~	~~CERAMIC 1000PF~~	~~10%~~	~~400V~~	~~D601 A 8-719-510-51~~	~~DIODE D3S860F~~		
C609	1-104-759-11	ELECT 470MF	20% 200V	D602	8-719-911-19	DIODE 1SS119	
C610	1-164-625-11	CERAMIC 680PF	10% 500V	D603	8-719-510-48	DIODE DIN20R	
C611	1-164-625-11	CERAMIC 680PF	10% 500V	D604	8-719-510-48	DIODE DIN20R	
C612	1-136-169-00	FILM 0.22MF	5% 50V	D605	8-719-022-97	DIODE D2S4MF	
C613	1-136-169-00	FILM 0.22MF	5% 50V	D606	8-719-022-97	DIODE D2S4MF	
C614	1-129-719-91	FILM 0.027MF	10% 630V	D607	8-719-510-26	DIODE DINL20	
C615	1-164-625-11	CERAMIC 680PF	10% 500V	D608	8-719-510-26	DIODE DINL20	
C616	1-165-127-11	CERAMIC 470PF	10% 500V	D609	8-719-510-26	DIODE DINL20	
C617	1-137-366-11	FILM 0.0022MF	5% 50V	D610	8-719-510-26	DIODE DINL20	
C618	1-165-127-11	CERAMIC 470PF	10% 500V	D611	8-719-110-17	DIODE RD10ESB2	
C619	1-106-367-00	MYLAR 0.01MF	10% 200V	D612	8-719-109-90	DIODE RD5.6ESB3	
C620	1-165-127-11	CERAMIC 470PF	10% 500V	D613	8-719-303-49	DIODE R2M	
C621	1-165-127-11	CERAMIC 470PF	10% 500V				
C622	1-126-952-11	ELECT 1000MF	20% 16V				

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KV-13M10/MT1300/
RM-Y116 RM-Y123
KV-14R10/1460R
RM-Y116 RM-Y123

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R047	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R339	1-216-045-00	METAL GLAZE	680 5% 1/10W
R048	1-216-025-00	METAL GLAZE	100 5% 1/10W	R341	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R049	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R343	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R050	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R345	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R052	1-216-295-00	METAL GLAZE	0 5% 1/10W	R346	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R054	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R347	1-216-025-00	METAL GLAZE	100 5% 1/10W
R056	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R351	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R057	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R356	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R058	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R360	1-216-041-00	METAL GLAZE	470 5% 1/10W
R060	1-216-295-00	METAL GLAZE	0 5% 1/10W	R363	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R061	1-216-045-00	METAL GLAZE	680 5% 1/10W	R366	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R062	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R367	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R063	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R405	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R064	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R406	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R065	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R407	1-216-025-00	METAL GLAZE	100 5% 1/10W
R067	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				(KV-13M10/14R10)
R101	1-216-073-00	METAL GLAZE	10K 5% 1/10W				(KV-13M10/14R10)
R202	1-249-415-11	CARBON	680 5% 1/4W				(KV-1460R/MT1300)
R203	1-215-899-11	METAL OXIDE	15K 5% 2W F	R408	1-216-295-00	METAL GLAZE	0 5% 1/10W
R205	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R409	1-216-295-00	METAL GLAZE	0 5% 1/10W
			(KV-1460R/MT1300)				(KV-13M10/14R10)
R206	1-216-689-11	METAL GLAZE	39K 5% 1/10W	R410	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R207	1-216-083-00	METAL GLAZE	27K 5% 1/10W				(KV-13M10/14R10)
R208	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R411	1-216-041-00	METAL GLAZE	470 5% 1/10W
			(KV-13M10/14R10)				(KV-13M10/14R10)
R209	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R412	1-216-041-00	METAL GLAZE	470 5% 1/10W
R210	1-216-033-00	METAL GLAZE	220 5% 1/10W				(KV-13M10/14R10)
R211	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R413	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R253	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				(KV-13M10/14R10)
R254	1-216-015-00	METAL GLAZE	39 5% 1/10W	R414	1-216-097-00	METAL GLAZE	100K 5% 1/10W
							(KV-13M10/14R10)
R258	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R415	1-216-295-00	METAL GLAZE	0 5% 1/10W
R260	1-216-295-00	METAL GLAZE	0 5% 1/10W				(KV-13M10/14R10)
R263	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R418	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R264	1-216-041-00	METAL GLAZE	470 5% 1/10W				(KV-13M10/14R10)
R265	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R419	1-216-023-00	METAL GLAZE	82 5% 1/10W
							(KV-13M10/14R10)
R266	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R420	1-249-417-11	CARBON	1K 5% 1/4W
R267	1-216-089-91	METAL GLAZE	47K 5% 1/10W				(KV-13M10/14R10)
R268	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R422	1-216-295-00	METAL GLAZE	0 5% 1/10W
R270	1-249-385-11	CARBON	2.2 5% 1/4W				(KV-13M10/14R10)
R271	1-249-417-11	CARBON	1K 5% 1/4W	R423	1-216-049-00	METAL GLAZE	1K 5% 1/10W
			(KV-13M10/14R10)				(KV-13M10/14R10)
R272	1-249-411-11	CARBON	330 5% 1/4W	R425	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
			(KV-13M10/14R10)				(KV-13M10/14R10)
R273	1-249-411-11	CARBON	330 5% 1/4W	R426	1-216-113-00	METAL GLAZE	470K 5% 1/10W
			(KV-13M10/14R10)				(KV-13M10/14R10)
R301	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R428	1-216-295-00	METAL GLAZE	0 5% 1/10W
R302	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R430	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R311	1-216-678-11	METAL CHIP	13K 0.50% 1/10W	R431	1-216-295-00	METAL GLAZE	0 5% 1/10W
R312	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R433	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R313	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W	R436	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R314	1-216-117-00	METAL GLAZE	680K 5% 1/10W				
R315	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R439	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R321	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R441	1-216-025-00	METAL GLAZE	100 5% 1/10W
R322	1-216-295-00	METAL GLAZE	0 5% 1/10W				(KV-13M10/14R10)
R323	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R442	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R324	1-216-025-00	METAL GLAZE	100 5% 1/10W	R445	1-216-081-00	METAL GLAZE	22K 5% 1/10W
							(KV-13M10/14R10)
R325	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R501	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R326	1-216-025-00	METAL GLAZE	100 5% 1/10W	R505	1-216-349-00	METAL OXIDE	1 5% 1W F
R327	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R506	1-216-429-00	METAL OXIDE	270 5% 1W F
R328	1-216-025-00	METAL GLAZE	100 5% 1/10W	R507	1-247-891-00	CARBON	330K 5% 1/4W
R333	1-216-295-00	METAL GLAZE	0 5% 1/10W	R508	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R334	1-216-295-00	METAL GLAZE	0 5% 1/10W	R509	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R336	1-216-121-00	METAL GLAZE	1M 5% 1/10W				
R338	1-216-049-00	METAL GLAZE	1K 5% 1/10W				

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KV-13M10/MT1300/
RM-Y116 RM-Y123
KV-14R10/1460R
RM-Y116 RM-Y123

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R510	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R637	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R511	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R690	1-216-355-11	METAL OXIDE	3.3 5% 1W F
R512	1-215-445-00	METAL	10K 1% 1/4W				
R513	1-216-645-11	METAL CHIP	560 0.50% 1/10W				
R515	1-216-675-11	METAL CHIP	10K 0.50% 1/10W				
R518	1-215-431-00	METAL	2.7K 1% 1/4W				
R519	1-215-879-11	METAL OXIDE	47K 5% 1W F				
R520	1-216-648-11	METAL CHIP	750 0.50% 1/10W				
R523	1-215-471-00	METAL	120K 1% 1/4W				
A R525	1-216-675-11	METAL CHIP	10K 0.50% 1/10W				
R527	1-216-678-11	METAL CHIP	13K 0.50% 1/10W				
R531	1-216-359-00	METAL OXIDE	6.8 5% 1W F				
R532	1-215-457-00	METAL	33K 1% 1/4W				
R533	1-216-359-00	METAL OXIDE	6.8 5% 1W F				
R534	1-215-462-00	METAL	51K 1% 1/4W				
R536	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W				
R538	1-215-864-00	METAL OXIDE	150 5% 1W F				
R539	1-215-870-11	METAL OXIDE	1.5K 5% 1W F				
R540	1-249-441-11	CARBON	100K 5% 1/4W				
R542	1-216-083-00	METAL GLAZE	27K 5% 1/10W				
R543	1-218-764-11	METAL CHIP	330K 0.50% 1/10W				
R544	1-216-654-11	METAL CHIP	1.3K 0.50% 1/10W				
R545	1-216-097-00	METAL GLAZE	100K 5% 1/10W				
R547	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R548	1-216-113-00	METAL GLAZE	470K 5% 1/10W				
R549	1-216-369-00	METAL OXIDE	1 5% 2W F				
R554	1-216-043-00	METAL GLAZE	560 5% 1/10W				
R555	1-215-897-11	METAL OXIDE	6.8K 5% 2W F				
R557	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R558	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R559	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R560	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
A R563	1-215-883-71	METAL OXIDE	22 5% 2W F				
A R601	1-202-892-91	SOLID	4.7K 20% 1/2W				
R602	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R605	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R606	1-260-288-11	CARBON	0.47 5% 1/2W				
R607	1-247-889-00	CARBON	270K 5% 1/4W				
R608	1-247-889-00	CARBON	270K 5% 1/4W				
R609	1-216-355-11	METAL OXIDE	3.3 5% 1W F				
R610	1-216-355-11	METAL OXIDE	3.3 5% 1W F				
R611	1-247-889-00	CARBON	270K 5% 1/4W				
R612	1-247-889-00	CARBON	270K 5% 1/4W				
R613	1-249-409-11	CARBON	220 5% 1/4W				
R614	1-247-891-00	CARBON	330K 5% 1/4W				
R615	1-216-101-00	METAL GLAZE	150K 5% 1/10W				
R616	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R617	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W				
R618	1-215-471-00	METAL	120K 1% 1/4W				
R619	1-247-811-31	CARBON	150 5% 1/4W				
R620	1-249-430-11	CARBON	12K 5% 1/4W				
R621	1-260-099-11	CARBON	1K 5% 1/2W				
R622	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R623	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R625	1-216-355-11	METAL OXIDE	3.3 5% 1W F				
R626	1-247-811-31	CARBON	150 5% 1/4W				
R628	1-249-415-11	CARBON	680 5% 1/4W				
R629	1-216-687-11	METAL CHIP	33K 0.50% 1/10W				
R630	1-216-687-11	METAL CHIP	33K 0.50% 1/10W				
R631	1-249-431-11	CARBON	15K 5% 1/4W				
R632	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R634	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R635	1-212-857-00	FUSIBLE	10 5% 1/4W F				
R636	1-216-049-00	METAL GLAZE	1K 5% 1/10W				

<RELAY>

A RY601 1-755-032-11 RELAY

<SWITCH>

S001 1-571-532-21 SWITCH, TACTIL
S002 1-571-532-21 SWITCH, TACTIL
S003 1-571-532-21 SWITCH, TACTIL
S004 1-571-532-21 SWITCH, TACTIL
S005 1-571-532-21 SWITCH, TACTIL

S006 1-571-532-21 SWITCH, TACTIL

<TRANSFORMER>

A T501 1-853-142-11 TRANSFORMER ASSY. FLYBACK (MX-E70245)
T551 1-437-195-11 TRANSFORMER HORIZONTAL DRIVE
A T601 1-423-895-11 TRANSFORMER LINE FILTER (LFT)
A T602 1-423-895-11 TRANSFORMER LINE FILTER (LFT)
A T603 1-426-819-11 TRANSFORMER CONVERTER (PIT)

T604 **A** 1-423-906-31 TRANSFORMER CONVERTER (PRT)

<THERMISTOR>

A TWP601 1-810-511-21 THERMISTOR POSITIVE

<TUNER>

A TU101 1-598-047-00 TUNER BTP-LA401

<VARISTOR>

VDR601 1-810-551-21 VARISTOR

<CRYSTAL>

X301 1-760-190-41 VIBRATOR, CRYSTAL

*A-1331-346-A C BOARD, COMPLETE

*4-374-912-01 COVER (MAIN), CV VOL
*4-374-913-01 COVER (REAR LID), CV VOL

<CAPACITOR>

C701 1-136-601-11 FILM 0.01MF 10% 630V
C701 1-137-490-11 FILM 0.01MF 10% 1KV
C704 1-162-116-00 CERAMIC 680PF 10% 2KV
C706 1-124-916-11 ELECT 22MF 20% 25V
C712 1-164-082-11 CERAMIC 560PF 10% 50V

C732 1-164-081-11 CERAMIC 470PF 10% 50V
C752 1-164-081-11 CERAMIC 470PF 10% 50V
C771 1-164-083-11 CERAMIC 680PF 10% 50V
C772 1-164-083-11 CERAMIC 680PF 10% 50V
C773 1-164-083-11 CERAMIC 680PF 10% 50V

• The components identified by **A** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

C

Les composants identifiés par:
une trame et une marque **△**
sont critiques pour la sécurité
Ne les remplacer que par une
pièce portant le numéro spécifié.

The components identified by
shading and mark **△** are critical
for safety
Replace only with part number
specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
<CONNECTOR>			
CN701	1-695-915-11	TAB (CONTACT)	
CN702	1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
CN703	*1-564-509-11	PLUG, CONNECTOR 6P	

REF. NO.	PART NO.	DESCRIPTION	REMARK
<DIODE>			
D770	8-719-911-19	DIODE 1SS119	
D771	8-719-911-19	DIODE 1SS119	
D772	8-719-911-19	DIODE 1SS119	
D773	8-719-911-19	DIODE 1SS119	
D777	8-719-109-72	DIODE RD3.9ESB2	
D790	8-719-911-19	DIODE 1SS119	
D791	8-719-911-19	DIODE 1SS119	
D792	8-719-911-19	DIODE 1SS119	

REF. NO.	PART NO.	DESCRIPTION	REMARK
<JACK>			
J701	△ 1-526-819-11	SOCKET, PICTURE TUBE	

REF. NO.	PART NO.	DESCRIPTION	REMARK
<COIL>			
L701	1-410-478-11	INDUCTOR 47UH	

REF. NO.	PART NO.	DESCRIPTION	REMARK
<TRANSISTOR>			
Q711	8-729-326-11	TRANSISTOR 2SC2611	
Q731	8-729-326-11	TRANSISTOR 2SC2611	
Q751	8-729-326-11	TRANSISTOR 2SC2611	
Q770	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q771	8-729-200-17	TRANSISTOR 2SA1091-0	
Q772	8-729-200-17	TRANSISTOR 2SA1091-0	
Q773	8-729-200-17	TRANSISTOR 2SA1091-0	

REF. NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>			
R700	1-260-087-11	CARBON 100 5%	1/2W
R702	1-260-131-11	CARBON 470K 5%	1/2W
R703	1-260-123-11	CARBON 100K 5%	1/2W
R704	1-216-369-00	METAL OXIDE 1 5%	2W F
R706	1-260-127-11	CARBON 220K 5%	1/2W
R707	1-260-131-11	CARBON 470K 5%	1/2W
R708	1-202-719-00	SOLID 1M 20%	1/2W
R710	1-260-105-11	CARBON 3.3K 5%	1/2W
R711	1-247-807-31	CARBON 100 5%	1/4W
R712	1-215-924-00	METAL OXIDE 15K 5%	3W F
R714	1-249-429-11	CARBON 10K 5%	1/4W
R716	1-249-412-11	CARBON 390 5%	1/4W
R717	1-249-393-11	CARBON 10 5%	1/4W
R730	1-260-105-11	CARBON 3.3K 5%	1/2W
R731	1-247-807-31	CARBON 100 5%	1/4W
R732	1-215-924-00	METAL OXIDE 15K 5%	3W F
R734	1-249-429-11	CARBON 10K 5%	1/4W
R736	1-249-412-11	CARBON 390 5%	1/4W
R737	1-249-393-11	CARBON 10 5%	1/4W
R750	1-260-105-11	CARBON 3.3K 5%	1/2W
R751	1-247-807-31	CARBON 100 5%	1/4W
R752	1-215-924-00	METAL OXIDE 15K 5%	3W F
R754	1-249-429-11	CARBON 10K 5%	1/4W
R756	1-249-412-11	CARBON 390 5%	1/4W
R757	1-249-393-11	CARBON 10 5%	1/4W
R770	1-249-437-11	CARBON 47K 5%	1/4W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R774	1-249-437-11	CARBON 47K 5%	1/4W
R775	1-249-417-11	CARBON 1K 5%	1/4W
R776	1-249-409-11	CARBON 220 5%	1/4W
R790	1-249-417-11	CARBON 1K 5%	1/4W
R791	1-249-413-11	CARBON 470 5%	1/4W

REF. NO.	PART NO.	DESCRIPTION	REMARK
<VARIABLE RESISTOR>			
RV701A	1-230-619-11	RES, ADJ, METAL GLAZE 110K	
RV702	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
RV703	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	

REF. NO.	PART NO.	DESCRIPTION	REMARK
MISCELLANEOUS			

△ 1-426-146-01		COIL, DEMAGNETIZATION	
1-452-277-00		MAGNET, BMC	
1-504-256-11		SPEAKER (8CM)	
△ 1-765-486-11		CORD, POWER (WITH CONNECTOR) 10A/125V	
1-766-374-11		PLUG, F-PIN	

REF. NO.	PART NO.	DESCRIPTION	REMARK
△ 8-451-418-11		DEFLECTION Yoke Y14NDA2	
V901	△ 8-735-561-05	PICTURE TUBE (A34JBU10X)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
ACCESSORIES AND PACKING MATERIALS			

1-417-182-11		CONVERTER	
1-501-372-41		ANTENNA, TELESCOPIC	
3-758-850-21		MANUAL, INSTRUCTION	
3-758-850-31		MANUAL, INSTRUCTION	(KV-13M10(CND)/MT1300)

REF. NO.	PART NO.	DESCRIPTION	REMARK
3-758-850-41		MANUAL, INSTRUCTION (KV-1460R/14R10)	
*4-039-866-01		CUSHION (UPPER) (ASSY)	
*4-039-867-01		CUSHION (LOWER) (ASSY)	
*4-039-871-01		INDIVIDUAL CARTON (KV-13M10/MT1300)	
*4-040-502-01		INDIVIDUAL CARTON (KV-1460R/14R10)	
*4-041-253-11		BAG, PROTECTION	

REF. NO.	PART NO.	DESCRIPTION	REMARK
REMOTE COMMANDER			
1-466-966-11		REMOTE COMMANDER (RM-Y116)	(KV-13M10/14R10)
9-903-826-01		COVER, BATTERY (FOR RM-Y116)	(KV-13M10/14R10)
1-467-738-11		REMOTE COMMANDER (RM-Y123)	(KV-MT1300/1460R)
9-907-089-01		COVER, BATTERY (FOR RM-Y123)	(KV-MT1300/1460R)